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Environmental Protection
Agency

Office of Emergency and
Remedial Response
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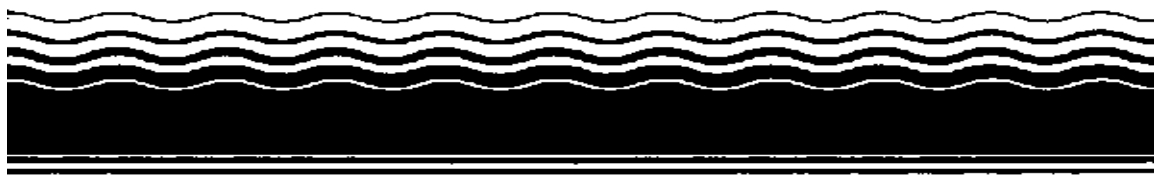
Superfund



EPA

National Remedy Review Board

Progress Report: Fiscal Year 1997



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Introduction

EPA created the National Remedy Review Board (the Board) in November 1995 as part of a comprehensive package of reforms designed to make the Superfund program faster, fairer, and more efficient. This report is the second annual report on the Board's progress. It focuses on significant accomplishments for the fiscal year (FY) ending September 30, 1997. However, it also presents information not publicly available when the Board issued its 1996 report, as well as information on several Board reviews conducted in the first quarter of FY 1998. The report notes this where appropriate. This report should help those interested in the Board's work learn more about the review process, its contribution to the Superfund program, and how interested parties can contribute to review efforts.

EPA believes the Board has accomplished a great deal this past year. The reviews have contributed to a more cost effective, consistent Superfund program, improved the quality of several high-cost cleanup decisions, and contributed positively to human health and environmental protection. In addition, FY 1997 Board recommendations may result in potential site cleanup cost savings of more than \$6 million, bringing the cumulative reduction in estimated cleanup costs to over \$37 million. The Board expects these savings estimates to increase as Regions complete their analyses of Board comments and issue proposed plans in the coming months.

The next section describes the Superfund reform initiative and explains

how the Board contributes to its goals. The following sections discuss the Board's operations, refinements, influence on Superfund cleanups, and resource issues. Included as attachments to this report are several EPA documents and memoranda that provide information about Board operating procedures, cleanup decision reviews, and other issues. Note that several Board operating procedures have changed in the past year. Please refer to the section titled "NRRB Operating Improvements" for an explanation of these changes.

EPA's Superfund Reforms

The Superfund program is an ambitious and complex environmental program that protects citizens and the environment from the dangers of abandoned or uncontrolled hazardous waste sites. When Congress enacted CERCLA¹ (the Superfund law) in 1980, the challenge of cleaning up what was assumed to be a few hundred discrete, land-based cleanups appeared relatively straightforward. The problem of neglected hazardous waste sites, however, has revealed itself to be far more complicated and widespread than anyone at first realized. EPA now recognizes that the number and complexity of hazardous waste sites across the nation dwarfs original estimates.

As a logical outgrowth of its experience managing the Superfund program, EPA has

¹Superfund is authorized by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended. 42 U.S.C. §9601 et. seq. The program's principal implementing regulation is the National Oil and Hazardous Substances Pollution Contingency Plan, also known as the NCP 40 CFR 300.

put in place a series of Superfund reforms. These reforms change substantively the way the Agency handles its responsibilities within existing laws. The reforms accelerate the pace and reduce the cost of cleanups, streamline remedy selection, increase fairness, promote economic redevelopment, and better integrate federal and state cleanup programs. These changes, however, do not alter the law's preference that Superfund cleanups provide long-term reliability and reduce the toxicity, mobility, or volume of waste through treatment. The Agency believes these reforms will save money without sacrificing public health or environmental protection. One of the principal program reforms is the National Remedy Review Board.

The National Remedy Review Board

The Board has been fully operational since January 1996. Its goal is to review proposed high cost cleanup decisions to assure that they are cost effective and consistent with current law, regulations, and guidance.

The Board generally meets quarterly to review the proposed cleanup decisions that meet its cost-based review criteria. The Board is essentially a peer-review group that understands both the Regional and Headquarters perspectives in the remedy selection process. The product of the review is a memorandum sent from the Board Chair to the appropriate Regional decision maker. This memorandum documents Board recommendations about the proposed cleanup strategy.

The Board is composed of managers or senior technical experts from each EPA Region, as well as senior technical or policy experts from EPA offices important to Superfund remedy selection issues. This membership ensures that the Board adopts a cross-Regional perspective when it examines key issues. It also provides for senior policy and technical input from EPA Headquarters and Laboratories. Offices represented on the Board include the Office of Emergency and Remedial Response (OERR), Office of Research and Development, Technology Innovation Office, Office of Indoor Air and Radiation, Federal Facilities Restoration and Reuse Office, and Office of General Counsel. The Board is Chaired by Bruce Means, Senior Process Manager for Response Decisions in OERR. See Attachment 2 for a list of Board members.

FY 1997 Board Reviews

The Board reviewed eight cleanup decisions in FY 1997 and three cleanup decisions in the first quarter of FY 1998, bringing the total number of reviews as of January 1998 to 23. In all cases, the Regions conduct analyses to decide whether and to what extent the reviews may ultimately affect their cleanup approaches. Table 1 presents summary information on each cleanup decision the Board has reviewed from its inception to January 1998.

Please note that EPA Regions are still considering Board recommendations on several cleanup decisions, particularly those conducted most recently. EPA Regions, however, have already estimated cleanup cost reductions of more than \$6 million

from FY 1997 reviews. Since the Board began its reviews in early 1996, EPA estimates total cleanup cost reductions of more than \$37 million. The Board fully expects these savings estimates to increase as Regions complete their analyses of Board comments and issue proposed plans. Below are just two examples of how Board recommendations have contributed to significant cost savings since the Board last issued this report.

- The Board reviewed a cleanup decision for the New Bedford Harbor, Massachusetts, site in September 1996. One recommendation the NRRB made was for the Region to assess whether its air monitoring program was too extensive given the nature of the contaminants and planned cleanup actions. The Region subsequently analyzed the need for this continued monitoring and found that it could adjust the monitoring program and reduce costs by approximately \$8.4 million.
- At the Tex Tin site in Texas, Board comments encouraged the Region to reassess how threats from a contaminated on-site building might best be addressed. As a result, the Region found a way to save approximately \$6 million compared with its original proposal.

It is important to recognize that estimated cost reductions such as these do not reflect the full range of benefits gained from Board reviews. Other important benefits include greater scrutiny of cleanup costs, increased national consistency in remedy selection, improved technical analysis of promising cleanup strategies, better-articulated decision rationale at high

cost sites, and increased confidence of Agency staff and stakeholders in the final remedy.

Board Review Criteria

The Board uses the following criteria to determine whether it will review a site. The Board will review all proposed Superfund cleanup decisions (final or interim final) for which: (1) the action costs more than \$30 million; or (2) the action costs more than \$10 million and is 50% greater in cost than the least-costly, protective, cleanup alternative that complies with other laws or regulations “applicable” or “relevant and appropriate” to the site decision or action.

The criteria above cover federal facility sites with the following exceptions.

- For Department of Energy sites where the primary contaminant is radioactive waste, the Board will review proposed cleanup decisions where: (1) the action costs more than \$75 million; or (2) the action costs more than \$25 million and this cost is 50% greater than that of the least costly, protective, cleanup alternative that complies with other laws or regulations “applicable” or “relevant and appropriate” to the site decision or action.
- The Board does not review proposed decisions for Base Realignment and Closure (BRAC) sites.

The Board, as of FY 1998, will also review all proposed non-federal facility non-time-

critical removal actions (NCRAs)
estimated to cost more than \$30 million.

The Board Review Process

As soon as the Region determines that a proposed action will trigger Board review, the RPM calls the state/tribe, potentially responsible party (PRP), and community group to notify them of the pending review and explain the review process. Approximately four weeks before the meeting, the RPM delivers to the Board the informational site package that the Board will use to conduct its review.

For each review, the Board meets in two stages: information-gathering and deliberations. The EPA site manager (Remedial Project Manager, or RPM) invites state and/or tribal representatives to participate in the information-gathering phase of the appropriate review. These representatives may participate in the deliberative discussion only for state/tribe-lead fund-financed decisions and state/tribe enforcement-lead decisions where the state/tribe seeks EPA concurrence. Otherwise, the Board limits its deliberative discussion to Agency personnel.

At the meeting, the RPM begins the information-gathering phase with a briefing that focuses on key remedy selection issues. Following the RPM briefing, state and/or tribal representatives present their view of key issues. The Board generally responds with technical questions to clarify issues related to the site and proposed cleanup strategy. The Board may also discuss

community, state/tribe, and/or PRP
technical concerns in detail.

The Board then deliberates for several hours, focusing on whether the proposed cleanup decision is cost effective and otherwise consistent with the National Oil and Hazardous Substances Contingency Plan (NCP) and program guidance. The Board asks the RPM to attend the deliberation. The Board drafts its recommendations based on this discussion.

After the review, the Board transmits a memorandum from the Board Chair to the appropriate Regional decision maker. This memorandum documents any recommendations, advice, or findings the Board may have. Regional decision makers are then responsible for explaining, in a memorandum to the Board Chair, how the Region has considered the recommendations. The Region places both memoranda in the site's Administrative Record. Below are examples of the kind of recommendations the Board makes (excerpted from several recent Board memoranda):

- The NCP sets forth program expectations to treat principal threats wherever practicable. Another expectation is to contain low level threats, because treating these wastes may not be cost effective or practicable. The NCP also states that, for many sites, EPA will use a combination of treatment and containment. For this site, the information presented to the Board did not fully explain the extent to which the explosives-contaminated soils to be treated constitute principal threat wastes. The Board believes that less costly containment alternatives may be adequate for at least some of these

- materials, given the anticipated future land use and ground water considerations at the site. The [site managers] should further explore these alternatives or more thoroughly explaining the decision document its rationale for choosing treatment over containment.
- During remedial design it may be possible to take advantage of existing soil or hydrogeologic characteristics to refine and focus the extent or intensity of remediation work, and still achieve the desired remediation endpoints in a reasonable time frame. The Region should continue to examine key areas in more detail to refine the number of acres needing various levels of remediation to optimize the cost-effectiveness of the revegetation.
 - The Board believes that there may be alternate (lower cost) approaches to constructing the proposed "Corrective Action Management Unit" in the lagoon area. For example, adequate dewatering and stabilization of the sludge may be achieved by surcharging the area to achieve load-bearing capacity, while adequate cap performance may be achieved using the surcharge soils and the proposed impermeable material. The Board recommends that the [site managers] evaluate the feasibility of this or similar approaches.
 - The Board is concerned that the quarry may remain a long-term source of contamination to the shallow ground water. The State should evaluate the appropriateness of ground water extraction near the quarry to reduce the potential for plume migration.
 - [Site managers should] . . . require PRPs to address facility-specific contamination sources. Such action is important to reduce continued aquifer degradation and reduce the potential for future groundwater remediation efforts.
 - The [site managers] should explain [their] rationale for addressing subsurface soil. This explanation should consider the potential for soil contamination as a continuing source of groundwater contamination, the exposure assumptions used in establishing preliminary remediation goals (for the protection of health and/or environmental effects), and the incremental costs associated with addressing subsurface soils.

NRRB Operating Improvements

This past year the Board conducted an extensive analysis of its operating procedures. The purpose was to respond to stakeholder concerns and assess whether the Board could improve its performance given the experience gained in the first year. This included gathering and analyzing stakeholder comments and concerns, working with EPA Headquarters and Regional management to assess Board performance, soliciting suggestions for improvement, and sometimes, holding intensive internal meetings to guarantee the Board was conducting efficient, effective reviews. The following section summarizes changes or refinements to the Board's operating procedures resulting from this work.

Non-Time-Critical Removal Action (NTCRA) Reviews

Superfund removal actions can be cost-effective, efficient ways to address health or environmental threats. Consequently, EPA is using NTCRAs increasingly to carry out relatively high-cost response actions and expedite cleanups at National Priorities List sites. To assure that these high cost NTCRA decisions are consistent with national policies and guidance, the Board will review all proposed non-federal facility NTCRAs estimated to cost more than \$30 million. The review should occur before the Engineering Evaluation/Cost Analysis (EE/CA) is issued for public comment. This review criterion is effective as of October 1, 1998.

EPA officials are currently working with DOE Headquarters and other federal agency officials to discuss Board review of federal facility NTCRAs. Until the Agency reaches an official agreement with its federal counterparts, the NRRB will not review NTCRAs at federal facility sites.

High Cost Sites that do not Trigger Review Criteria

The Board holds its reviews early in the cleanup process to take advantage of senior management and technical expertise before the Region finalizes its initial proposed action for a site. During this phase of the decision making process, Regions develop initial cost estimates according to formal EPA cost estimating guidance. However, these estimates are preliminary and carry with them a range of uncertainty. The Board understands stakeholder interest in the quality and accuracy of these cost estimates because the estimates determine whether a site triggers Board review. In response to stakeholder concerns the Board has adopted the following policy:

- For sites that are close to, but do not trigger, the \$30 million cost criteria: the appropriate Regional Board member will discuss briefly with the Board the key remedy selection and cost issues at the site and present the Region's position on whether the site would benefit from Board review.

Post-Proposed Plan Cost Increases

The Board recognizes that marginal, post-proposed plan cost increases are not uncommon. The Board believes it is important, however, to review cleanup decisions that do not trigger review criteria at the proposed plan stage, but undergo significant cost increases after the Region issues the proposed plan. Although the Board does not expect to deal with such a situation often, it has in place the following operating protocol.

- For proposed actions that did not originally trigger Board review, and the Region subsequently develops a new proposal that costs 20% more than the original cost estimate, and these costs trigger review criteria, then the Board will review the cleanup decision before ROD signature.
- Where the Board has already reviewed a proposed action and the Region subsequently develops a new proposal (or chooses a different alternative) that costs 20% more than the original preferred alternative, then the Board will review the proposed decision.

PRP and Community Technical Submissions to the Board

In FY1997, the Board doubled the page limit for PRP and community group submissions to 10 pages. The Board believes that 10 pages of technical comment, if it is focused on those issues relevant to the Board's discussions, is sufficient space to highlight any critical issues concerning remedy selection at the site.

TABLE 1: CUMULATIVE BOARD REVIEW SUMMARY

<i>Site and Region</i>	<i>Review Date</i>	<i>Decision Stage at Review</i>	<i>Board memo available to public*</i>
Fernald OU-5, R5	January 1996	Post-PP	yes
Petrochem, R8	January 1996	Post-PP	yes
Operating Industries, Inc., R9	January 1996	Pre-PP	yes
Fernald OU-3, R5	March 1996	Pre-PP	yes
Coleman Evans, R4	May 1996	Post-PP	yes
Petroleum Products, R4	May 1996	Pre-PP	yes
Dupont Necco Park, R2	May 1996	Pre-PP	yes
Roebbling Steel, R2	June 1996	Pre-PP	yes
Jack's Creek, R3	June 1996	Pre-PP	yes
Shipyard Sediments, R10	August 1996	Post-PP	yes
New Brighton, R5	August 1996	Pre-PP	yes
New Bedford Harbor, R1	August 1996	Pre-PP	yes
Fletcher Paint, R1	November 1996	Pre-PP	yes
Tar Creek, R6	January 1997	Pre-PP	yes
Anaconda Smelter, R8	April 1997	Pre-PP	yes
Continental Steel, R5	April 1997	Pre-PP	yes

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Montrose/DelAmo, R9	April 1997	Pre-PP	pending
Nebraska Ordnance Plant, R7	July 1997	Post-ROD	yes
Oak Ridge National Lab, Surface Impoundment OU, R4	July 1997	Post-PP	yes
Tex Tin, R6	July 1997	Pre-PP	yes
San Gabriel, Puente Valley OU, R9	December 1997	Pre-PP	yes
Lenz Oil, R5	December 1997	Pre-PP	yes
Joliet Army Ammunition , R5	December 1997	Pre-PP	yes

* Please refer to attachment 6 for the full text of Board recommendations publicly available as of January 1998.

Key: R=Region, OU=operable unit, PP=proposed plan, ROD=Record of Decision

FY 1997 Operating Costs

EPA estimates that FY 1997 Board activities cost approximately \$435,000. These estimates include salary and expense monies related to the Board's activities, support contractors, travel and lodging, and incidental costs (*e.g.*, fees for meeting rooms). These costs average out to approximately \$54,000 per decision reviewed by the Board in FY 1997.

Conclusion

With the support and hard work of Regional management and staff, the Board has accomplished a great deal this past year. The reviews have contributed to a more cost effective, consistent Superfund program, improved the quality of several high-cost cleanup decisions, and contributed positively to human health and environmental protection. In addition, FY 1997 Board recommendations may result in potential site cleanup cost savings of more than \$6 million, bringing the cumulative reduction in estimated cleanup costs to over \$37 million. The Board expects these estimates to increase as Regions complete their analyses of Board comments and issue proposed plans in the coming months. The Board has made special efforts this year to refine its operating protocol to ensure that it enhances the remedy selection process, does not delay cleanups or alter the public's role in remedy selection, and takes full account of stakeholder concerns. The Board made several important changes in its operating procedures this year designed to improve the process for all concerned. The Board

continues to solicit opinion from affected groups or individuals so that the review process might continue to improve.

Please refer questions, comments, or suggestions about the NRRB or this report to Rich Norris in the Office of Emergency and Remedial Response (E-mail: norris.rich@epamail.epa.gov, telephone: 703-603-9053, fax: 703-603-9104). The Board also encourages you to visit its Internet site at:

<http://www.epa.gov/superfund/oerr/nrrb/nrrb.htm>

The Board will update the information on this site periodically.

Attachments

Attachment 1

November 28, 1995, EPA Memorandum: “Formation of the
National Superfund Remedy Review Board”



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: Formation of National Superfund Remedy Review Board

FROM: Elliott P. Laws
Assistant Administrator

TO: Director, Office of Site Remediation and Restoration -
Region I
Director, Emergency and Remedial Response Division -
Region II
Director, Hazardous Waste Management Division -
Regions III, IX
Director, Waste Management Division - Region IV
Director, Superfund Division - Regions V, VI, VII
Assistant Regional Administrator, Office of Ecosystems
Protection
and Remediation - Region VIII
Director, Environmental Cleanup Office - Region X

DATE STAMPED:
NOV 28 1995

Purpose

This memorandum requests your assistance in establishing the National Superfund Remedy Review board recently announced by the Administrator as one of the key Superfund Administrative Reforms. This Review Board is intended to help control remedy costs and to promote both consistent and cost-effective decisions at Superfund sites, including federal facilities.

Background

As you all know, cost plays an important role in Superfund response decisions. The statute, in fact, mandates that, in addition to being protective, all remedies must be cost-effective. This mandate is built into the remedy selection process established under the National Contingency Plan (NCP), and expanded upon in a number of related program guidances. In this year of greatly reduced budgets, it is even more important for us to focus on this criterion in our decision making. On October 2, 1995, EPA Administrator Carol Browner announced a collection of Administrative Reforms intended to help our program achieve significant cost savings without compromising a remedy's protection of human health or the environment or reliability. Today, as one of these Reforms, I am announcing the formation of the National Superfund Remedy Review Board.

Discussion

By establishing this Board, I intend to help control remedy costs by providing a cross-Regional management-level review of high cost (and thus, potentially controversial) decisions in "real time" on a site-specific basis.

Board Structure and Function

This national Review Board will be comprised of senior Agency managers or experts on remedy selection, cost effectiveness, and program implementation from both the Regions and Headquarters. Each Region will have one management-level representative on the Board. Headquarters representatives will include national experts from the Federal Facilities Restoration and Reuse Office, the Technology Innovation Office, the Office of General Counsel, ORD's National Risk Management Research Laboratory, and the Office of Emergency and Remedial Response (OERR). Other Offices may be requested to participate as the need arises. The Board will be chaired by Bruce Means, Senior Process Manager for Response Decisions in OERR.

All proposed cleanup actions at sites where: (1) estimated costs for the preferred alternative are over \$30M; or (2) proposed remedy costs are over \$10M and 50% greater than the costs of the least-costly, protective, ARAR-compliant remedy will be subject to the Board's review. As other cost control "rules of thumb" are developed (under a separate Administrative Reform), these "guides" may also be used to signal the need for this Board's review. My overall expectation, based on previous ROD history, is that this program should result in Board review of approximately 10% of FY96 actions.

The Review Board will consider the nature of the site, the risks posed by the site, regional and State/Tribal opinions on proposed actions, the quality and reasonableness of the cost estimates, and any other relevant factors or program guidances in making "advisory recommendations" to the Regional Administrator regarding EPA's preferred remedy before a proposed plan is issued for public comment. The overall goal of the reviews will be to ensure sound decision making consistent with current law, regulations, and guidance. The Board's reviews will be performed quickly but will require advanced planning by the Region to account for the added review time. Remedies subject to Board review should be brought to the Board's attention as soon as the Region has identified them as likely 'preferred alternatives,' but in any case before the proposed plan is announced for public comment. Regions are encouraged to coordinate with OERR Regional Service Center Coordinators as early as possible in the process.

Especially since we are operating under a greatly reduced budget this year, I am sensitive to the likely increase in workload for you and your staff. This new Board will require additional work for us all and may briefly delay release of a small number of proposed plans by about two months. For these reasons, the Board will work to establish a review process that requires a minimum of travel and effort for Board participants. The Board is likely to form standing subgroups, based upon geography, expertise or workload. Reviews are likely to involve the faxing of relevant materials to subgroups for discussion by conference call after a brief review period. Details will be developed further as part of the Board's initial organizing discussions.

The Board is expected to be fully operational by January 1996. However, proposed remedies planned for issuance in the first quarter of FY '96 which meet the screening criteria noted above should also be discussed with my office.

Key Messages

By establishing this Board, I want to encourage decision makers to think even harder about the costs of response actions at every Superfund site.

However, this effort does not change the Agency's delegation authorities or alter in any way the public's current role in site decisions. This current effort is intended to facilitate the application of our national program's extensive experience to a select number of "high stakes" and thus, potentially controversial site decisions.

Implementation

If you have not already done so, please send your nominations for Board membership by December 8, to Bruce Means at (703) 603-8815; FAX: (703) 603-9103; Mail code (5204G). We have already welcomed the nominations of Walter Graham (Region 3), Wendy Carney (Region 5), Bill Honker (Region 6), and Wayne Pierre (Region 10). Bruce will be contacting your representatives shortly to schedule an introductory conference call later this month. For your information, Attachments A and B present an overview of the Board's tentative start up schedule and membership, respectively. I expect the Board to be up and running by the beginning of January 1996.

I recognize that this additional review for the sites that exceed these cost control triggers may briefly delay the release of proposed plans. However, it is critically important to the Agency that we provide both the public and Congress the necessary assurances that Superfund dollars are being well spent. This Board will do much to provide those assurances.

Thank you for your prompt attention to this important matter.

Attachments

cc: Regional Administrators
Steve Herman, OECA
Bob Huggett, ORD
Jon Cannon, OGC
Romona Trovato, ORIA

Attachment A

National Superfund Remedy Review Board
Tentative Start-Up Schedule
(11/20/95)

October/November

- Analyze past RODs meeting trigger criteria to examine trends.
- Issue memorandum to Regions announcing the Board kickoff.
- Complete membership list.

December

- Initial meeting/conference call to introduce concepts, discuss possible charter, operations/workflow models, roles.
- Develop/revise charter; determine need for additional Regional/HQ members/contacts.

January

- Fully operational.

Attachment B

National Superfund Remedy Review Board
Proposed Membership
(11/20/95)

Region 1 -- TBD
Region 2 -- John Frisco
Region 3 -- Walter Graham
Region 4 -- TBD
Region 5 -- Wendy Carney
Region 6 -- Bill Honker
Region 7 -- TBD
Region 8 -- TBD
Region 9 -- TBD
Region 10 -- Wayne Pierre

OERR - Bruce Means
ORD/National Risk Management Research Lab - TBD
FFRRO - Jim Woolford
OGC - TBD
OSWER/TIO - TBD
Other Offices may be invited to participate as needed.

Attachment 2
National Remedy Review Board Members
January 1998

**National Remedy Review Board Membership
January 1998**

	Region/ Office	Name	Phone	Fax
1	OERR	Bruce Means (Chair)	(703)603-8815	(703)603-9133
2	Region 1	Dan Coughlin	(617)573-9621	(617)573-9662
3	Region 2	John Frisco	(212)637-4400	(212)637-4439
4	Region 3	Walter Graham	(215)566-3146	(215)566-3001
5	Region 4	Jan Rogers	(404)562-8792	(404)562-8788
6	Region 5	Wendy Carney	(312)353-6553	(312)353-9306
7	Region 6	William Honker	(214)665-6726	(214)665-6660
8	Region 7	Craig Smith	(913)551-7683	(913)551-7145
9	Region 8	Dale Vodehnal	(303)312-6761	(303)312-6897
10	Region 9	John Kemmerer	(415)744-2421	(415)744-1917
11	Region 10	Wayne Pierre	(206)553-7261	(206)553-0957
12	FFRRO	Tim Mott	(202)260-2447	(202)260-5646
13	NRMRL	Patricia Erickson	(513)569-7406	(513)569-7676
14	OERR	Paul Nadeau	(703)603-8794	(703)603-9133
15	OERR/ERT	André Zownir	(908)321-6744	(908)321-6724
16	OGC	Sheila Igoe	(202)260-7724	(202)260-0584
17	ORD	Jerry Jones	(405)436-8593	(405)436-8614
18	ORIA	Ron Wilhelm	(202)564-9379	(202)565-2042
19	FFEO	Jean Rice	(202)564-2589	(202)501-0694
20	TIO	Mike Kosakowski	(703)603-7192	(703)603-9135
	NRRB Staff Leader	Rich Norris	(703)603-9053	(703)603-9104

Attachment 3
Role of Interested Parties in the NRRB Process

Role of Interested Parties in the National Remedy Review Board Process

What is the role of “potentially responsible parties” (PRPs)?

- This Superfund reform does not alter the current mechanisms for PRP involvement in the remedy selection process. The current process typically allows PRPs to work closely with the Agency in conducting the RI/FS. This requires periodic meetings between EPA and the PRPs to ensure that issues relating to site characterization, treatability of contaminated media, and the feasibility of different remedial options are fully considered.
- Where the PRPs have entered an agreement with the Agency to conduct the RI/FS, the EPA region notifies them of the pending review as soon as it identifies the site as a review candidate. At this time the region offers the PRPs an opportunity to summarize in writing (less than 10 pages) any technical issues they believe are pertinent to the cleanup decision. The region attaches the summary to the briefing package that is sent to the Board four weeks before the meeting.
- Comments of PRPs that have not been working closely with the Agency early in the remedy selection process will be solicited when the region issues the proposed plan for comment.
- PRPs are not involved in any direct discussions with the NRRB.

What is the role of the community?

- At sites where EPA has awarded a Technical Assistance Grant (TAG) or recognized a Community Advisory Group (CAG), the RPM should notify the appropriate TAG contact and/or the CAG Chairperson as soon as the Region identifies the site as a review candidate.
- The RPM offers the TAG group and/or the CAG the opportunity to summarize in writing (less than ten pages) any concerns or issues that they believe important to the NRRB's discussion of remedy selection issues. The RPM should coordinate all interaction with community groups with the appropriate EPA Regional Community Involvement Coordinator.
- The RPM attaches the submission to the informational site package. Neither community members nor TAG Technical Advisors will be involved in direct discussions with the NRRB.
- Comments of community groups that have not been working closely with the Agency early in the remedy selection process will be solicited when the region issues the proposed plan for comment.

Attachment 4
September 26, 1996, EPA Memorandum:
“National Remedy Review Board”



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board

FROM: Stephen D. Luftig, Director
Office of Emergency and Remedial Response

TO: Director, Office of Site Remediation and Restoration
Region I
Director, Emergency and Remedial Response Division
Region II
Director, Hazardous Waste Management Division
Regions III, IX
Director, Waste Management Division
Region IV
Director, Superfund Division
Regions V, VI, VII
Assistant Regional Administrator, Office of Ecosystems

Protection and Remediation
Region VIII
Director, Environmental Cleanup Office
Region X

DATE STAMP:
SEPTEMBER 26 1996

Purpose

The purpose of this memorandum is to update you on National Remedy Review Board progress and bring to your attention important Board operating procedures.

Background

As you know, Assistant Administrator Elliott Laws formed the Board in November 1995 as part of Administrator Browner's Superfund reform initiatives. The Board's goals are to help control remedy costs and promote consistent and cost-effective decisions at Superfund sites. It has been functioning since January 1996. Though impeded by FY 96 appropriation delays, to date, the Board has held four meetings and numerous conference calls, during which it completed reviews on twelve sites. The Board has also worked to finalize the procedures under which it will operate in the near future.

This dedicated group of Regional and national Agency experts, coupled with the hard work of many Regional program colleagues, has already contributed greatly to improved consistency and cost effectiveness in

cleanup decisions. I want to thank you and your staff especially for working so closely with us during this important first year. Board efforts in FY 96 will be detailed in a year-end report for your information.

Key Operating Protocol

To ensure that the upcoming fiscal year's Board activities are as productive as those of the past nine months, we need your continued assistance. An effective site review requires significant advance preparation, organization, and time commitment from the Regional management and staff who participate. In particular, the RPM is responsible for several important coordination functions as highlighted below. I recognize that the past year's budget situation has stretched our already limited resources. Nonetheless, it is essential that we commit the resources necessary to guarantee informed and constructive dialogue at Board meetings.

For your information, the text below highlights several important operating protocol describing how the Board expects to work with the Regions, involve important stakeholders and handle the timing of reviews. Involvement of the Board is a key step for many sites in the Superfund remedy selection process. Each Regional office is responsible for ensuring that these protocol are followed to avoid delaying proposed plan issuance.

Regional Responsibilities

As indicated in the original Reform language, the Board makes "advisory recommendations" to the Regional decision maker who then makes the final remedy decision giving consideration to the complete range of available information. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is important to remember that the NRRB does not change the Agency's delegation authorities or alter in any way the public's role in site decisions. It is expected, however, that the Regions will provide for the record a written response to Board recommendations. In general, a Region should not issue the proposed plan until it has received and considered the written Board recommendations.

State/Tribal Involvement

The Board recognizes that the States and Tribes have a unique role in the Superfund program as "co-regulators," and has taken steps to ensure their significant involvement in the review process. With this in mind:

- The Region is to consult with the affected State or Tribal government well before the Board meetings to ensure that key decision makers understand the background and intent of the review process. The Region should also make clear that the States and Tribes will have the opportunity to present their views directly to the Board.
- As part of current procedure, the Region develops an informational site package that forms the basis of Board review. The Board asks that each Region work with appropriate State and Tribal personnel to ensure that the "summary of State issues" section of that package is accurately developed.
- The Regional RPM is to distribute the full site package to the appropriate State and/or Tribe concurrent with Board distribution. He or she should also solicit their general reaction to the material at this time.

- For each site, the Board meets in two stages: information-gathering and deliberations. The Board will routinely invite State and/or Tribal decision makers to the information-gathering phase of its site reviews. The Board will invite the State and/or Tribe to participate in the deliberative discussion for State-lead fund-financed decisions, and for State/Tribe enforcement-lead decisions where the State/Tribe seeks EPA concurrence. Otherwise, the Board will limit its deliberative discussion to Agency personnel.

PRP Involvement

- Private parties significantly involved with the site study and/or response actions are to be notified by the appropriate Regional office of the Board's site review.
- The Board believes that PRPs who conduct the RI/FS can provide valuable input to the review process. Therefore, the Regional RPM is to solicit technical comment or discussion, well before the Board meetings, from the PRPs that are substantively involved in conducting the RI/FS. These submissions should not exceed five pages in length, and should be attached to the informational site package provided to all Board members.
- The Board recognizes that PRPs who do not conduct the RI/FS may conduct studies that might also be valuable to the Board's review process. In these cases, the Region may, at its discretion, solicit similar input from these stakeholders.

Community Involvement

- For sites at which EPA has awarded a Technical Assistance Grant (TAG) or recognized a Community Advisory Group (CAG), the Region is to notify appropriate contacts well before the meeting and ensure they also understand the review process.
- The Region is to offer the TAG recipient and/or CAG the opportunity to submit written comments or concerns to the Board concerning site-specific issues they think will be important to the Board's discussions. These submissions are also limited to five pages in length.
- Where the Region has established substantial working relationships with other stakeholder groups early in the RI/FS process, the Region may, at its discretion, offer similar opportunity for written comment from these parties.

Timing of Review

- The Board plans to review sites early in the remedy selection process, before the Region releases the proposed plan for public comment.
- Occasionally, however, a post-proposed plan site may benefit from Board review. For example, remedy changes in response to public comment may increase the total remedy costs. Where these additional cleanup costs exceed 20 percent of the original cost estimate and trigger normal Board review criteria, the Board may review the draft remedy.

Federal Facilities Review Criteria

The Board is continuing its discussions with representatives from the Federal Facilities Restoration and Reuse Office (FFRRO), the Federal Facilities Enforcement Office (FFEO), and with other federal agencies to develop review criteria for federal facility sites. While these final

criteria are under development, FFRRO and FFEO have recommended the following interim criteria:

- For federal facility sites where the primary contaminant is radioactive waste, the Board will raise the dollar trigger from \$30 million to \$60 million and delete the "50% greater than the least costly alternative" criterion.
- The Board will not review NPL site decisions on Base Realignment and Closure (BRAC) sites.
- All other federal facility sites (i.e., those that involve non-radioactive waste only) are subject to standard review criteria.

To assist you in communicating with other Superfund stakeholders about the Board review process, I am attaching to this memorandum a fact sheet titled "Questions and Answers on EPA's NRRB." Additional tools to assist you and your staff with the review process will be available shortly.

I believe this Reform has accomplished much during the past nine months. The hard work put forth by your staff and the Board members has paid off in significant cost savings. I look forward to similar success over the next fiscal year. Finally, the Board plans to continue its dialogue with interested stakeholders to work toward a process that is agreeable and fair to all involved. We welcome your thoughts in this area as well.

Please contact me, or National Remedy Review Board Chair Bruce Means (at 703-603-8815) if you have any questions or comments.

cc: E. Laws
T. Fields
OERR Center Directors
OERR Senior Process Managers
B. Breen
J. Woolford
W. Kovalic
L. Starfield
W. Farland
R. Olexsey
E. Trovato

ROUND THREE:
SUPERFUND REFORMS AT A GLANCE

EPA National Superfund Remedy
Review Board

This reform is one of twenty new "common sense" administrative reforms announced in October 1995, by US EPA Administrator Carol Browner. These reforms will fundamentally redirect the Superfund program to make it faster, fairer, and more efficient.

WHAT IS THE NATIONAL REMEDY REVIEW BOARD?

The National Remedy Review Board (the Board) is one of the principle Superfund Reforms that Administrator Browner announced in October 1995. Its goal is to promote cost-effectiveness and appropriate national consistency in remedy selection at Superfund sites. To accomplish this, the Board analyzes proposed site-specific cleanup strategies to ensure they are consistent with current law and regulations. The Board also considers relevant Agency guidance. The Board's members are technical experts and managers from each EPA Region and several EPA Headquarters offices.

After its review, the Board issues recommendations as to how or whether a potential Superfund site remedy decision can be improved. Although Board recommendations are not binding, EPA Regional decision makers give them substantial consideration. EPA believes the Board is contributing significantly to more cost-effective, consistent Superfund remedies.

WHAT ARE THE CRITERIA THAT TRIGGER BOARD REVIEW?

The Board will review proposed remedies for which (1) the proposed remedy cost is more than \$30 million; or (2) the proposed remedy costs more than \$10 million and is 50% greater than the least-costly, protective cleanup alternative that also complies with other laws or regulations that are either "applicable" or "relevant and appropriate" to a site decision.

The Board expects to review every proposed decision that meets the above criteria at Superfund sites that are not Federal facilities. Because of their size and complexity, the Board is developing a separate set of Federal facility site review criteria. EPA encourages anyone with concerns about a particular site to contact the EPA Region in which that site resides.

WHAT DOES THE BOARD LOOK AT WHEN IT REVIEWS A SITE?

The Board analyzes the cleanup strategy to ensure that it is consistent with the Superfund law and the National Oil and Hazardous Substances Pollution Contingency Plan (or NCP). The NCP is the Federal regulation that details procedures for responding to oil or hazardous substance releases. The Board also considers relevant EPA cleanup guidance.

When they review a site, the Board members ask many questions about the proposed cleanup strategy. Site-specific circumstances often influence the nature of the discussion. Among others, Board members investigate subjects like these below:

- What are the details of the Regional proposal for site cleanup?
- What are the positions of the State/Tribe, potentially responsible parties (PRPs), and communities?
- Will the cleanup strategy be effective?
- What is the rationale behind exposure scenarios and risk assumptions?
- Are the cleanup goals appropriate and attainable?
- Have other approaches to achieve the cleanup goals been evaluated?
- Are the cost estimates reasonable?
- Is the strategy consistent with other Agency decisions?

WHAT IS THE ROLE OF INTERESTED PARTIES IN THE REVIEW PROCESS?

Community Involvement

For sites at which EPA has awarded a Technical Assistance Grant (TAG) or recognized a Community Advisory Group (CAG), the Region will notify appropriate contacts well before the Board meets to ensure they understand the nature and intent of the review process.

The Region will offer the TAG recipient and/or CAG the opportunity to submit written comments or concerns to the Board concerning

site-specific issues they think are important. These submissions are limited to five pages in length.

Where the Region has established substantial working relationships with other interested groups early in the RI/FS process, the Region, at its discretion, may offer similar opportunity for written comment.

State/Tribe Involvement

The Board recognizes the unique State/Tribe role in the Superfund program as "co-regulators," and has taken steps to ensure significant State involvement in the review process.

The Region will consult with the affected State/Tribe well before the Board meeting to ensure that key State/Tribe decision makers understand the nature and intent of the review process. They will also make clear that the State/Tribe will have the opportunity to present their views at Board meetings.

As part of current procedure, the Region develops an informational site package that forms the basis of Board review. The Board will ask that each Region work with the appropriate State/Tribe to ensure that the "summary of State issues" section of that package is accurately developed.

The Region will distribute the full site package to the appropriate State/Tribe concurrent with Board distribution. They also will solicit the State/Tribe's general reaction to the material.

For each site, the Board meets in two stages: information-gathering and deliberations. The Board will routinely invite State/Tribe decision makers to the information-gathering phase of its site reviews. The Board will invite the State/Tribe to participate in the deliberative discussion for State/Tribe-lead Fund-financed decisions, and for State/Tribe enforcement-lead decisions where the State/Tribe seeks EPA concurrence. Otherwise, the Board will limit its deliberative discussion to Agency personnel.

PRP Involvement

The Board believes that PRPs who conduct the RI/FS can provide valuable input to the review process. Therefore, the Regional Project Manager (RPM) will solicit technical comment or discussion, well before the Board meetings, from the PRPs that are substantively involved in conducting the RI/FS. These submissions should not exceed five pages in length, and should be attached to the informational site package provided to all Board members.

The Board also recognizes that PRPs who do not conduct the RI/FS may conduct valuable studies. In these cases, the Region, at its discretion, may solicit similar input.

HOW DO I FIND OUT WHETHER THE RRB WILL REVIEW A SITE?

If you have questions about a particular Superfund site, please call the EPA Region in which it is located. They will put you in touch with someone who knows about the site.

FOR MORE INFORMATION.

You may also call EPA's Superfund Hotline at 1-800-424-9346 (or 703-412-9810 within the Washington, D.C. area) to get general information about EPA, the Remedy Review Board, and the Superfund program. The Hotline will refer you to the appropriate EPA Region,

program office, or staff member should you have questions they cannot answer.

Attachment 5

December 18, 1997, EPA Memorandum:
“Review of Non-Time-Critical Removal Actions
by the National Remedy Review Board”



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: Review of Non-Time-Critical Removal Actions
by the National Remedy Review Board

FROM: Stephen D. Luftig, Director /S/ DEC 18 1997
Office of Emergency and Remedial Response

TO: Director, Office of Site Remediation and Restoration
Region I
Director, Emergency and Remedial Response Division
Region II
Director, Hazardous Waste Management Division
Regions III, IX
Director, Waste Management Division
Region IV
Director, Superfund Division
Regions V, VI, VII
Assistant Regional Administrator, Office of Ecosystems Protection
and Remediation, Region VIII
Director, Environmental Cleanup Office
Region X
Regional Counsels
Regions I - X

Purpose

The purpose of this memorandum is to notify you that the National Remedy Review Board (NRRB) will be reviewing proposed non-time-critical removal action (NTCRA) decisions beginning in FY 1998. The NRRB will review all proposed NTCRAS for sites at fund- and enforcement-lead NPL sites where costs for the preferred action are estimated to exceed \$30 million. While Federal facilities have full authority for NTCRAS at their sites, the Office of Emergency and Remedial Response (OERR), the Federal Facilities Restoration and Reuse Office (FFRRO), and the Federal Facilities Enforcement Office (FFEO) are working together with other Federal agencies to determine how best to consider expensive proposed decisions at Federal facility sites. Until agreements are reached with appropriate Federal agency officials, the NRRB will not review NTCRAS for Federal facility sites.

I ask that you please forward this notice to the appropriate Regional contacts for implementation.

Background

As you know, the Office of Solid Waste and Emergency Response established the NRRB in November 1995 as one of Administrator Browner's Superfund Reform initiatives. The Board's goals are to help control remedy costs and promote both consistent and cost-effective decisions at Superfund sites, including those at Federal facilities.

The Board reviews proposed decisions when the following criteria are exceeded: (1) estimated costs for the preferred alternative exceed \$30M; or (2) proposed remedy costs exceed \$10 M and they are 50% greater than those of the least-costly, protective, ARAR-compliant alternative. These criteria have triggered Board review of 23 remedial actions representing all ten Regions in the last two years.

As a result of implementation of the Superfund Accelerated Response Model (SACM) and recent Reform efforts, many Superfund managers have looked to the removal program for ways to expedite site cleanup. Since removal actions often provide excellent, cost-effective tools for quick response to pressing health or environmental threats, NTCRAS are being used more than they were in the past to carry out relatively high-cost response actions. Given this increased role for NTCRAS in costly site cleanups, I believe it is prudent to extend the NRRB program for review of high cost decisions to these actions as well.

Discussion

Generally, we do not believe there will be many high cost NTCRAS. In fact, most NTCRAS are likely to cost less than \$5M. However, I believe it is important to review a portion of Superfund's NTCRAS in order to provide the necessary assurances that our decisions are consistent with national policies and guidance. With this in mind, I ask that you submit all proposed NTCRAS that are estimated to cost more than \$30M to the NRRB for review. This review should occur before the Engineering Evaluation/Cost Analysis (EE/CA) is issued for public comment.

The Board will review information packages for NTCRAS similar to those reviewed for high cost remedial actions. In doing so, the NRRB will consider the nature of the site; the risks posed; the response actions considered with associated costs; Regional, PRP, State/Tribal, and community opinions on the proposed action (to the extent they are known at the time); and any other relevant factors or program guidance in making advisory recommendations to the Regional decision maker. The Region, in turn, is asked to respond in writing to these recommendations. Both the NRRB recommendations and the Regional response will become part of the site Administrative record.

I fully appreciate that the timing and coordination of proposed NTCRAS with other ongoing cleanup activity will often be critically important. As a result, I expect the NRRB to make every effort to provide the review within a satisfactory timeframe. However, it is incumbent on the Regions to make sure that parties bring the actions triggering review to the Board as soon as possible. This will likely require advanced planning by the Regions and others to account for the NRRB review time (i.e., about 8 weeks). I recognize that many NTCRAS are led by PRPs, State/Tribes, or Federal facilities; thus, the planning process should consider the time required both to coordinate with and solicit input from relevant stakeholders, and the time for concurrence in enforcement actions. Generally, stakeholders are invited to participate in the review of NTCRAS in the same manner as for remedial actions. Please talk with your Regional NRRB representative for more details.

As you know, while in some cases EPA works very closely with other Federal agencies in site remediation, in general, Federal facilities have full authority to conduct NTCRAS at their sites. For this reason, OERR, FFRRO, and FFEO are working together with other Federal agency officials to determine how best to consider expensive proposed decisions at Federal facility sites. It should be noted that a recent EPA memorandum on the Final FY 1998 Superfund Reforms Strategy (dated November 13, 1997) indicated that NTCRAS at Federal facility sites (other than BRAC sites) that are estimated to cost more than \$30 million (or \$75 million for Department of Energy (DOE) radioactive waste sites) are expected to be reviewed by the NRRB in FY '98. Recently, however, EPA officials met with DOE Headquarters and other Federal agency officials to discuss the NRRB review of NTCRAS in more detail. As a result, EPA and DOE have agreed to work together to explore additional options for NRRB involvement. Dialogue also continues between EPA and the other Federal agencies. Therefore, until an official agreement is reached with other Federal agency officials, the NRRB will not review NTCRAS at Federal facility sites.

Implementation

Effective immediately, please identify for NRRB review all proposed NTCRAS at sites other than Federal facility sites that are estimated to cost more than \$30 million. Your Regional NRRB representative will work with appropriate managers and staff to address relevant site-specific questions about timing and review materials, and to establish a review schedule that minimizes potential for pipeline delays.

I believe that this Reform has accomplished much to improve both the consistency and cost effectiveness of our cleanup decisions over the last two years. Indeed, the NRRB has been well received by a wide range of stakeholders and is likely to play a significant role in a reauthorized Superfund. Without question, this reform's success is the direct result of the hard work of your staff and management. We greatly appreciate these efforts and look forward to your continued support in the review of NTCRAS. Please contact me, or Bruce Means, NRRB Chair, (703-603-8815), if you have any questions or comments.

cc: T. Fields
OERR Center Directors
OERR Senior Process Managers
B. Breen
J. Woolford
E. Salo
E. Cotsworth
W. Kovalic
W. Farland
R. Olexsey
National Remedy Review Board Members

Attachment 6
Publicly Available NRRB Review Memoranda
(Board Recommendations)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the
Fletcher Paint Superfund Site

FROM: Bruce K. Means, Chair
National Remedy Review Board

TO: Linda M. Murphy, Director
Office of Site Remediation and Restoration
EPA Region 1

DATE STAMPED:
DEC 5 1996

Purpose

The National Remedy Review Board (NRRB) has completed its review of the proposed remedial action for the Fletcher Paint Superfund site in Milford, New Hampshire. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review

As you recall, the Administrator announced the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost (and thus potentially controversial) proposed response actions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative. The NRRB review evaluates the proposed actions for consistency with the National Contingency Plan and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. The Region will then include these recommendations in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

NRRB Advisory Recommendations

The NRRB reviewed the site package for the Fletcher Paint site as well as information submitted by the Town of Milford and General Electric (GE). The Board met on November 21, 1996, with the EPA site Remedial Project Manager Cheryl Sprague, her Section Chief Dick Boynton, and with State representatives Richard Peases and Charlie Berubie to review and discuss this information. Based on this review and discussion, the members of the NRRB support the Region's preferred source control strategy, which combines treatment of soils using thermal desorption with containment of residual soils, and the groundwater restoration strategy of natural attenuation.

The Board makes the following additional observations:

- The Board is concerned about the implementability of and short-term risk that may be posed by GE's innovative thermal treatment technology. We support and encourage GE's desire to develop this promising technology. However, the Board suggests that GE conduct any pilot-scale demonstration at a site away from local residences to minimize the inherent potential risks involved with such a demonstration.
- Given the uncertainty associated with natural attenuation in bedrock aquifers, the Region should clarify in its decision documents for this site the expected time frame for groundwater restoration.

The NRRB appreciates the Region's efforts to work closely with the State, community, and responsible party to identify the currently proposed remedy. The Board members also express their appreciation to both the Region and the State of New Hampshire for their participation in the review process. In particular, we would like to thank Cheryl Sprague for her excellent presentation. We encourage Region 1 management and staff to work with their Regional NRRB representative and the Headquarters Region 1/9 Regional Accelerated Response Center to discuss appropriate follow-up actions.

Please do not hesitate to give me a call at 703-603-8815 if you have any questions.

cc: S. Luftig
E. Laws
T. Fields
M. Newton
B. Breen



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the New
Bedford Harbor Superfund Site

FROM: Bruce Means, Chair
National Remedy Review Board

TO: Linda M. Murphy, Director
Office of Site Remediation and Restoration
EPA Region 1

DATE STAMP:
AUGUST 12 1996

Purpose

The National Remedy Review Board (NRRB) has completed its review of the proposed remedial action for the New Bedford Harbor Superfund site in New Bedford, Massachusetts. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review

As you recall, the Administrator announced the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost (and thus potentially controversial) proposed response actions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative. In its review, the NRRB considers the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors or program guidance.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. The Region will then include these recommendations in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial

options, may influence the final Regional decision. It is important to remember that the NRRB does not change the Agency's delegation authorities or alter in any way the public's role in site decisions.

NRRB Advisory Recommendations

The NRRB reviewed the proposed plan for the New Bedford Harbor site, along with other relevant site information, on August 14th, 1996. The Board discussed the site with Commonwealth of Massachusetts Project Officer Paul Craffey, EPA RPM David Dickerson, EPA site attorney Cindy Catri, and Office of Site Remediation and Restoration Deputy Director Frank Ciavattieri. Based on this review and discussion, the NRRB generally supports the Agency's proposed cleanup strategy as presented in the proposed plan. The NRRB makes the following observations:

- The Commonwealth and Region have ensured that community interests are well represented in the decision making process through the use of several techniques, including professional facilitation. The Board accepted the Memorandum of Agreement announced on August 1, 1996, outlining the community's support of the proposed remedy as representing community concerns and issues.
- The NRRB believes that the air monitoring costs are high, given the nature of the proposed remedial action and contaminants to be addressed. The Board recommends that the Region carefully examine the need for what appears to be an overly extensive air monitoring program.
- The water treatment costs appear to be disproportionately large relative to the overall remediation costs. The Board recommends that the Region examine the Commonwealth and Federal ARARs that drive the stringency of the effluent discharge limits to determine whether a less costly treatment process would be adequate.
- The Board also notes that the proposed remedial actions targeting PCBs will address the highest concentrations of metals as well. If Region 1 selects a PCB cleanup goal other than the proposed 10 ppm/50 ppm for the upper and lower harbor, respectively, they should examine the effect of this change on metal remediation.

The NRRB appreciates the Region's efforts to work closely with the Commonwealth, local government and community to identify the current proposed remedy. The Board members also express their appreciation to both the Region and the Commonwealth of Massachusetts for their participation in the review process. We encourage Region 1 management and staff to work with their Regional NRRB representative and the Region 1/9 Regional Accelerated Response Center at Headquarters to discuss appropriate follow-up actions.

Please do not hesitate to give me a call if you have any questions at 703-603-8815.

cc: J. DeVillars
S. Luftig
E. Laws
T. Fields
M. Newton



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the DuPont,
Necco Park Site

FROM: Bruce Means, Chairman
National Remedy Review Board

TO: Richard L. Caspe, Director
Emergency and Remedial Response Division
EPA Region 2

DATE STAMP:
AUGUST 12 1996

Purpose

The purpose of this memorandum is to document the findings of the National Remedy Review Board (NRRB) on the proposed remedial action for the DuPont, Necco Park Site in New York State.

Background

As you recall, the Administrator established the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote both consistent and cost-effective decisions at Superfund sites. All proposed cleanup actions are to be reviewed by the Board where: (1) the estimated cost of the preferred alternative exceeds \$30 million; or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative. In its review, the NRRB considers the nature and complexity of the site; health and environmental risks; the range of alternative actions considered to address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors or program guidance.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. These recommendations are then to be included in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is important to remember that the NRRB does not change the Agency's delegation authorities or alter in any way the public's current role in site

decisions. This Reform is intended to bring to bear the program's extensive experience on decisions at a select number of high stakes sites.

NRRB Findings

The NRRB reviewed the proposed plan for the Necco Park site along with other relevant site information with Regional staff, including Dale Carpenter, Kevin Lynch, and George Shanahan, on May 7, 1996. Based on the information provided, the NRRB generally supports the Agency's proposal for source control presented in Alternative 9.

Key objectives of Alternative 9 are to minimize constituent loading to the far-field aquifer, create a physical barrier to subsurface DNAPL migration, minimize precipitation percolation through contaminated soil in the DNAPL source area, prevent direct human contact with contaminated soil, and reduce the overall volume of subsurface DNAPL. Based on these objectives, the NRRB recommends:

- At this time, the scope of the ROD should be limited to source control only, and should not make a final decision on off-site ground water in the far field aquifer. The Board recommends that this proposed alternative include evaluating the impact of the source control remedy on far-field groundwater contamination.
- Additional site characterization (sampling and analysis) should be conducted to assess whether natural attenuation may be effective in addressing far-field contamination.
- The proposed alternative includes upgrading the existing cap over portions of the Necco Park site to reduce percolation within the source area, while at the same time leaving other areas within the source area uncovered. The Region should consider extending the cap (or the use of other cover materials) to address infiltration in areas within the proposed grout curtain, but not currently addressed by this upgrade.
- Given the status (i.e., near completion) of cleanups for other sites in the area and that several unsuccessful attempts were made to design an area-wide multi-source cleanup strategy, the Board supports the current source-by-source approach for addressing regional contamination. However, the NRRB notes that conditions in this area suggest a more global, or multi-source cleanup/waste management strategy may have been appropriate, and recommends that the Region evaluate this type of approach for any future proposed remediation of the far-field aquifer contamination. For example, the Region may want to assess, as a future alternative, a strategy of adapting existing man-made structures, such as the Falls Street tunnel and the NYPA conduit drain jacket system, as an integral part of a collection system for multi-source treatment of far field contamination.

The NRRB appreciates the Region's efforts to develop the proposed remedy. The Board especially wants to thank the Region for their participation in the review process. The NRRB encourages Region 2 management and staff to work with their Regional NRRB representative and the OERR Region 2/6 Regional Accelerated Response Center at Headquarters to discuss appropriate follow-up actions.

Please do not hesitate to give me a call at 703-603-8815 should you have any questions.

cc: S. Luftig
E. Laws
T. Fields
B. Breen
J. Fox

E. Shaw



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the Roebling Steel Company Superfund Site

FROM: Bruce Means, Chair
National Remedy Review Board

TO: Richard L. Caspe, Director
Emergency and Remedial Response Division
EPA Region 2

DATE STAMP:
AUGUST 12 1996

Purpose

The purpose of this memorandum is to document the findings of the National Remedy Review Board (NRRB) on the proposed remedial action for the Roebling Steel Company Superfund Site in Florence Township, New Jersey.

Background

As you recall, the Administrator established the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative. In its review, the NRRB considers the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors or program guidance.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. These recommendations are then to be included in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is important to remember that the NRRB does not change the Agency's delegation authorities or alter in any way the public's current role in site

decisions. This Reform is intended to focus the program's extensive experience on decisions at a select number of high stakes sites.

NRRB Findings

The NRRB reviewed the proposed plan for the Roebling Steel Company site, along with other relevant site information, and discussed related issues with EPA Regional Project Manager Tamara Rossi on June 25, 1996. Based on this review and discussion, the NRRB generally supports the Agency's proposed cleanup strategy as presented in Alternative 3 of the proposed plan. However, the NRRB makes the following observations:

- The NRRB suggests that the Region consider an additional alternative that would consist of: (1) demolishing the "A Buildings" (those buildings that are contaminated and structurally unsound) and disposing the contaminated debris in an on-site landfill; and (2) decontaminating the "B Buildings" (which are also contaminated but structurally sound) to a risk level suitable for the expected future use. This recommendation should not be viewed as a proposal to select this alternative; only as a suggestion to evaluate it alongside others considered.
- Alternative 1, identified in the draft Proposed Plan as "no further action with institutional controls," should be amended to evaluate only "no further action" in order to establish the true baseline condition. Institutional controls should not be included as part of a no action alternative.
- Alternative 2, as it is explained in the draft proposed plan, does not appear to pass the NCP threshold criteria. It does not address lead contamination in the buildings, which contributes significantly to site risks.
- If the Region chooses Alternative 3, the Board believes that fine-tuning the building-specific decontamination strategies may save money during remedial design. For this analysis it may help to evaluate the per-building cost for varying decontamination levels and compare that data to the target residual risk levels. The Region should consider using value engineering to explore these opportunities.
- The Board encourages the Region, during the post-ROD remedial design phase, to continue working with potential site developers to determine the level of building decontamination necessary for potential future use. The remedy should not spend resources on decontaminating buildings for future use if the buildings will later be demolished by site developers.

The NRRB appreciates the Region's efforts to work closely with the State and community to identify the current proposed remedy. The Board especially wants to thank the Region and the State of New Jersey for their participation in the review process. The Board encourages Region 2 management and staff to work with their Regional NRRB representative and the Headquarters Region 2/6 Regional Accelerated Response Center to discuss appropriate follow-up actions.

Please do not hesitate to give me a call at 703-603-8815 if you have any questions.

cc: S. Luftig
E. Laws
T. Fields
B. Breen
J. Fox
E. Shaw



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the Jack's Creek Superfund Site

FROM: Bruce Means, Chair
National Remedy Review Board

TO: Thomas C. Voltaggio, Director
Hazardous Waste Management Division, Region 3

DATE STAMP:
AUGUST 12 1996

Purpose

The National Remedy Review Board (NRRB) has completed its review of the proposed remedial action for the Jack's Creek Superfund Site in Maitland, Pennsylvania. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review

As you recall, the Administrator announced the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost (and thus potentially controversial) proposed response actions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative. In its review, the NRRB considers the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors or program guidance.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. The Region will then include these recommendations in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is important to

remember that the NRRB does not change the Agency's delegation authorities or alter in any way the public's role in site decisions.

NRRB Advisory Recommendations

The NRRB reviewed the draft proposed plan (dated June 1996) for the Jack's Creek Site, a submission by potentially responsible parties for the site, and other relevant site information, and discussed site issues with EPA Region 3 Remedial Project Manager Garth Connor and Commonwealth of Pennsylvania Representatives on June 26, 1996. Based on this review and discussion, the NRRB does not believe there is sufficient information at this time to support the draft proposed plans' preferred alternative (alternative 9). Specific concerns include the following elements that were not clearly defined: site specific remedial action objectives (including a clear rationale for determining a principal threat level for lead in soils above which treatment is necessary), and current and future impacts on ground water. These concerns along with other recommendations are described below.

First, the Region should clarify the rationale for how contamination will be addressed in the context of site-specific remedial action objectives. For example, if treatment in alternative nine is preferred because contaminant levels greater than 10,000 ppm lead are believed to constitute a principal threat at this site, the Region should more thoroughly explain the basis for determining this lead concentration. The Preamble to the NCP sets out a program expectation regarding the treatment of principal threats wherever practicable, and defines a principal threat ". . . as wastes that cannot be reliably controlled in place, such as liquids, highly mobile materials (e.g., solvents), and high concentrations of toxic compounds (e.g., several orders of magnitude above levels that allow for unrestricted use and unlimited exposure)."

The NRRB acknowledges that lead concentrations at the Jack's Creek site are sufficiently high (up to 160,000 PPM) as to constitute a principal threat at some level. However, the Regional rationale for determining the principal threat level above which treatment is practicable and deemed necessary is unclear. Such a level should be determined on a site-specific basis and may be justified in several different ways. The Region should refer to "A Guide to Principal Threat and Low Level Threat Wastes" Superfund Publication 9380.3-06FS, dated November 1991 for additional information. Also, in considering this issue, the Region may benefit from conducting site-specific fate and transport modeling to help evaluate the potential threat of lead leaching to ground water from the proposed containment area. It is important to remember that while the NCP expectations and the principal threat guidance support the development of alternatives, the selection of an appropriate waste management strategy is determined ultimately through the remedy selection process outlined in the NCP (i.e., all remedy selection decisions are site-specific and must be based on a comparative analysis of the alternatives using the nine criteria).

A second fundamental concern of the NRRB is that the analysis did not clearly define current and future impacts from the site on groundwater. The narrative provided by the Region suggests elevated contamination levels in domestic drinking water sources on a sporadic basis. Further, the Remedial Project Manager for the site indicated that another round of samples had been taken and results were expected in the near future. The NRRB recommends that any impacts, especially as they might result in contamination of domestic supply wells, be sufficiently characterized and addressed through remedial action as necessary. Fate and transport modeling may be helpful in these analyses.

In addition, the NRRB offers the following recommendations:

The Region should consider using one or more of the recently developed adult lead exposure models (e.g., the "Bowers model" currently

under consideration by a subgroup of the Superfund Lead Technical Review Workgroup) to assist in the evaluation of baseline risk, and to help establish a site-specific lead cleanup level. Although not yet adopted in formal Agency policy, use of such a model can help fine-tune, or provide additional scientific and technical support for the Region's proposed soil lead cleanup level.

Also, the NRRB noted its support for the inclusion of the limited actions described in alternative two as part of any selected remedial action for the site. This support was qualified by the recommendation that these limited actions also include groundwater monitoring and an action to permanently prevent the domestic use of any onsite contaminated groundwater.

Finally, the NRRB questions the appropriateness of the proposed reconstruction of wetlands at Jack's Creek as a fund-financed action. Based on the information presented, this action does not appear to be an appropriate remediation expenditure. Creating a new wetland to replace one destroyed by the apparent expansion of site operations is not an integral part of addressing the current or potential risks from site-specific contamination. This situation should be distinguished from situations in which cleaning up site contamination damages the wetlands. In these cases, restoring the affected wetlands under Superfund authorities would be appropriate. The NRRB recommends that the Region explore other authorities to pursue the proposed wetlands work at Jack's Creek.

The Board members especially want to thank the Region and the Commonwealth of Pennsylvania for their participation in the review process. We encourage Region 3 management and staff to work with their Regional NRRB representative and the OERR Region 3/8 Accelerated Response Center at Headquarters to discuss appropriate follow-up actions. If you have any questions, please do not hesitate to call me at 703-603-8815.

cc: W. M. McCabe
S. Luftig
E. Laws
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T. Sheckells
B. Breen



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the Coleman Evans Wood Preserving Site.

FROM: Bruce Means, Chair
National Remedy Review Board

TO: Richard D. Green, Acting Director
Waste Management Division
EPA Region 4

DATE STAMPED:
AUGUST 12 1996

Purpose

The purpose of this memorandum is to document the findings of the National Remedy Review Board (NRRB) on the proposed remedial action for the Coleman Evans Wood Preserving Site in Florida.

Background

As you recall, the Administrator established the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative. In its review, the NRRB considers the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors or program guidance.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. These recommendations are then to be included in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is important to remember that the NRRB does not change the Agency's delegation authorities or alter in any way the public's current role in site decisions. This Reform is intended to focus the program's extensive experience on decisions at a select number of high stakes sites.

Findings

The NRRB met with the Regional and State Remedial Project Managers (RPMs) for the Coleman Evans Wood Preserving site on May 8, 1996. Based on that review and discussion, the members of the NRRB make the following observations.

The Board is in general agreement with the preferred cleanup approach (Alternative 4), which relies primarily upon thermal desorption to address remedial action objectives: preventing PCP leaching to groundwater, and mitigating direct human contact with or ingestion of dioxin. The remedy complies with the preference for treating principal threats stated in the National Contingency Plan, and complies generally with EPA's presumptive remedy guidance on treating soils at wood treater sites (OSWER Directive 9200.5-162). The Board supports cleaning up the site to levels indicated in the Region's proposal, which should allow unrestricted site use at an estimated cost of approximately \$20 million.

The Board notes two areas of concern, however. First, although thermal desorption remains a viable option for addressing health threats at this site, the Board cautions that the technology may not effectively treat on-site soils to the cleanup levels identified by the Region. Second, the State of Florida provided information to the Region the day before the NRRB meeting that may substantially affect dioxin soil cleanup requirements. They informed the Region that a new State law considers dioxin soil levels greater than seven parts per trillion (ppt) to be unacceptable. Neither the NRRB nor the Region can, at this time, completely evaluate the relative merits and cost effectiveness of various cleanup options, since extent of contamination sampling at these levels has not been conducted.

Region 4 is currently evaluating whether this law constitutes an applicable or relevant and appropriate requirement (ARAR). Board members noted that the seven ppt dioxin cleanup level is generally inconsistent with several dioxin decisions at other sites. Further, the Board questions whether current treatment technologies, such as thermal desorption or incineration, can reach this level.

Given the concerns noted above, the NRRB recommends that Region 4:

- Work with the Florida Department of Environmental Protection to clarify the cleanup objectives and requirements for the contaminated soil and groundwater at the site with particular emphasis on the seven ppt dioxin ARAR issue.
- Conduct a pilot-scale study on the effectiveness of thermal desorption for treating PCP and dioxin-contaminated soils at the site.
- Explore the feasibility and cost of enhancing Alternative 2, containment, given the uncertainty in the potential effectiveness of thermal desorption and the Region's previous experience in evaluating other treatment options for site contamination. This enhancement may include, but would not be limited to, a combination cap and slurry wall or an above ground containment vault.
- Consider a hybrid alternative that would employ both treatment and containment of the same soils. The Region may find it more cost effective to use a treatment technology other than thermal desorption (e.g., bioremediation) to address the principal threat posed by PCP and high dioxin levels, followed by a less expensive containment system or barrier (e.g., soil cover) to prevent residual dioxin exposures.

- Further explore the feasibility of Alternative 3, incineration, which should be able to meet Regional remediation goals at only slightly higher estimated cost. The NRRB appreciates, however, that the Region must fully consider community and State concerns regarding the use of incineration at this site.

The NRRB appreciates the Region's efforts to work closely with the State and community to identify the current proposed remedy. The Board members also express their appreciation to both the Region and the State of Florida for their participation in the review process. We encourage Region 4 management and staff to work with their Regional NRRB representative and the Region 4/10 Regional Accelerated Response Center at Headquarters to discuss appropriate follow-up actions.

Please do not hesitate to give me a call if you have any questions at 703-603-8815.

cc: S. Luftig
E. Laws
T. Fields
B. Breen
J. Hankinson, Jr.
J. Cunningham



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
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RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the
Surface Impoundment Unit for the Oak Ridge National Laboratory Site

FROM: Bruce K. Means, Chair
National Remedy Review Board

TO: Richard D. Green, Acting Director
Waste Management Division
EPA Region 4

DATE STAMPED:
AUGUST 15 1997

Purpose

The National Remedy Review Board (NRRB) has completed its review of the proposed remedial action for the Surface Impoundment Operable Unit of the Oak Ridge National Laboratory site in Oak Ridge, Tennessee. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review

As you recall, the Administrator announced the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost (and thus potentially controversial) proposed response actions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative. The NRRB review evaluates the proposed actions for consistency with the National Contingency Plan and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. The Region will then include these recommendations in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of

remedial options, may influence the final Regional decision. It is important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

NRRB Advisory Recommendations

The NRRB reviewed the site package for the Oak Ridge site and discussed related issues with EPA Remedial Project Manager Edward Carreras on July 30, 1997. Based on this review and discussion, the NRRB:

- Finds that the Department of Energy (DOE) proposal does not adequately demonstrate the cost effectiveness and environmental benefits of the preferred alternative (off-site disposal). Based on the proposed plan, other alternatives are protective and achieve remedial objectives at significantly lower cost.
- Finds that the absence of a site wide management plan impairs the remedy selection process for this facility. The Board understands that DOE will conduct a number of actions at the Oak Ridge reservation. In order to enhance the cost effectiveness of overall site remediation, the Board strongly recommends a comprehensive site-wide waste management plan be developed expeditiously. This plan should address the feasibility of the centralized waste management facility described as a contingency under alternative 6 in the proposed plan. However, development of this plan should not delay timely and appropriate action for the impoundment areas.

The NRRB appreciates the Region's efforts to work closely with the State and community to identify the current proposed remedy. The Board members also express their appreciation to the Region for their participation in the review process. We encourage Region 4 management and staff to work with their Regional NRRB representative and the Region 4/10 Accelerated Response Center at Headquarters to discuss any appropriate follow-up actions.

Please do not hesitate to give me a call if you have any questions at 703-603-8815.

cc: S. Luftig
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
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RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the
Petroleum Products Corporation Site.

FROM: Bruce Means, Chair
National Remedy Review Board

TO: Richard D. Green, Acting Director
Waste Management Division
EPA Region 4

DATE STAMPED:
AUGUST 12 1996

Purpose

The purpose of this memorandum is to document the findings of the National Remedy Review Board (NRRB) on the proposed "interim" remedial action for the Petroleum Products Corporation Site in Florida.

Background

As you recall, the Administrator established the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative. In its review, the NRRB considers the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors or program guidance.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. These recommendations are then to be included in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is important to remember that the NRRB does not change the Agency's delegation authorities or alter in any way the public's current role in site decisions. This Reform is intended to focus the program's extensive experience on decisions at a select number of high stakes sites.

Findings

The NRRB reviewed the Petroleum Products briefing package as well as information submitted by the potentially responsible party. The Board met on May 8, 1996, with the EPA and State Remedial Project Managers for the site. Based on their review and discussion, the members of the NRRB make the following observations.

Overall, the NRRB supports the proposed remedy (Alternative 7) for the Interim Action, which will employ soil stabilization/ solidification in the source area at an estimated cost of \$12,871,000. However, the NRRB's support for this alternative is based on the Region's high confidence that fixation will be able to capture most (e.g., 75 to 95 percent) of the contaminants of concern. Given less confidence, or less complete capture, the NRRB questions whether the remedy goals would be best achieved by this treatment-oriented option. The Region should consider containment-based options should fixation not capture a high proportion of the contaminants. The Board would like to note, however, that Alternative 7 is not inconsistent with future action anticipated at the site in any event.

The Board also makes the following observation: Alternative 7 triggered Board review because it costs more than \$10 million and was 50 percent more expensive than Alternative 2 (presented as the least-costly, protective, ARAR-compliant alternative in the NRRB briefing package). However, both the Region and the State report that they do not believe Alternative 2 to be protective. Based on the information presented, the Board supports this conclusion. Thus, in retrospect, there appears to be no alternative in the proposed plan that would fully satisfy the above criterion and trigger the Board's review. Future NRRB site nominations should reflect the Region's best judgement in the areas of estimated relative costs, protectiveness and ARAR compliance.

Recommendations

Given greater uncertainty in the overall effectiveness of the proposed Alternative 7 to capture soil contaminants, the Region may want to consider an additional alternative with the following characteristics:

- Instead of solidifying the entire area(s) encompassing high level polycyclic aromatic hydrocarbon and lead contamination, the Region should consider solidification and stabilization (s/s) of the outer boundaries of the hot spot(s), and combine this with a groundwater pump and treat system to remove the oil and prevent contaminant releases beyond the s/s periphery. The s/s soils would be equivalent to a grout curtain. When combined with a constant inward hydraulic gradient, s/s may provide an opportunity to restore the aquifer and eliminate the need for a groundwater technical impracticability waiver.
- If Alternative 7 is selected, the Region should place sufficient cover material over the stabilized hot spot(s) to address hazards to human health from direct contact exposure to the stabilized soils.
- The Region should clarify whether a potential health threat exists based on direct contact exposures associated with industrial land use. Given high surface soil lead levels, it is unclear why direct contact risks for workers are considered negligible. The Board recommends that the Region include a clear, detailed discussion of the nature of the threat posed by surface soil contamination and related risk management decisions in the final ROD. However, the Board cautions that the Region should consider the need for final disposition of site soils when designing the interim remedy. Should a surface soil threat exist, s/s alone may not fully address it. Further, it may be inappropriate to utilize

s/s on surface soils as part of an interim response action, only to follow this with surface soil excavation in the final ROD.

The NRRB appreciates the Region's efforts to work closely with the State, community, and responsible party to identify the current proposed remedy. The Board members also express their appreciation to both the Region and the State of Florida for their participation in the review process. We encourage Region 4 management and staff to work with their Regional NRRB representative and the Headquarters Region 4/10 Regional Accelerated Response Center to discuss appropriate follow-up actions.

Please do not hesitate to give me a call at 703-603-8815 if you have any questions.

cc: S. Luftig
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John Cunningham



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
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RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the
Continental Steel Superfund Site

FROM: Bruce K. Means, Chair
National Remedy Review Board

TO: William E. Muno, Director
Superfund Division
EPA Region 5

DATE STAMPED:
MAY 14 1997

Purpose

The National Remedy Review Board (NRRB) has completed its review of the proposed remedial action for the Continental Steel Superfund site in Kokomo, Indiana. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review

As you recall, the Administrator announced the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost (and thus potentially controversial) proposed response actions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative. The NRRB review evaluates the proposed actions for consistency with the National Contingency Plan and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. The Region will then include these recommendations in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

NRRB Advisory Recommendations

The NRRB reviewed the site package for the Continental Steel site and discussed related issues with the State of Indiana representatives Art Garceau (State Project Manager) and Pat Carrasquero (Chief, Superfund Section) on April 22-23, 1997. Based on this review and discussion, the NRRB makes the following recommendations:

General

- The State should clearly explain the extent to which site wastes either do or do not constitute principal threat source materials as defined in the National Contingency Plan and related guidance. Where any site wastes are identified as principal threat materials, decision documents should explain how the remedy addresses the NCP's preference for treatment of these materials.

Groundwater

- The State should fully develop and incorporate in the site decision documents a justification for the proposed technical impracticability (TI) waiver as well as the vertical and horizontal extent of the TI zone.
- The State should evaluate the appropriateness of locating ground water extraction in the immediate vicinity of the quarry, in order to maximize control over potential plume migration westward toward the creek. For the area between the recovery system and the creek, the State should investigate monitored natural attenuation as an alternative to the proposed recovery system to restore the shallow ground water.
- To the extent the state considers monitored natural attenuation as a means for ground water remediation (either as part of the proposed or alternative actions), it should evaluate this remediation approach using site specific characterization data and analyses that consider such factors as:
 - historical ground water and/or soil chemistry data that demonstrate a clear and statistically meaningful trend of declining contaminant mass and/or concentrations at appropriate monitoring or sampling points;
 - site characterization data that can be used to indirectly demonstrate the type of natural attenuation processes active at the site, and the rate at which such processes will reduce contaminant concentrations to required levels; for example, data needed for demonstrating occurrence of biological degradation processes include levels of dissolved oxygen, nitrite, iron (II), sulfate, methane, and carbon dioxide, among others;
 - data from field or microcosm studies (conducted in or with actual contaminated site media) that directly demonstrate microbial activity in the soil or aquifer material and its ability to degrade the contaminants of concern.

Markland Avenue Quarry

- The State proposed to leave existing contaminated fill material in the Markland Avenue Quarry. In view of this fact:
 - The State should fully develop and explain in its decision documents for this site, the rationale for removing the sediments and sludge from the quarry.

- The Board is concerned that the quarry may remain a long-term source of contamination to the shallow ground water. The State should evaluate the appropriateness of ground water extraction in the immediate vicinity of the quarry in order to minimize potential for plume migration.
- In view of the possibility that the quarry fill may remain a long-term contamination source, the State should consider using quarry fill materials that are more cost effective than "clean" fill to the extent allowable under State and federal law (e.g., building debris).
- It is unclear whether the added cost of the proposed impermeable cover designed to mitigate infiltration in the quarry area would be justified given that a significant amount of the quarry waste material would remain in the saturated zone. The State should consider a soil cover that is sufficient to prevent surface soil exposures (rather than one designed to mitigate infiltration). Such a cover may be constructed of relatively permeable and locally available soils.
- In the quarry area, the State appears to be proposing remediation goals based on residential use of the quarry fill materials although future residential use of the quarry is not expected. The State should ensure that the remediation goals and cap design for this area are consistent with the expected future land use of the quarry and its surrounding properties.

Kokomo and Wildcat Creeks

- Regarding the proposed actions for the creeks, the Board recommends that cleanup levels at this site be no lower than background levels. This is because these creeks are located in heavily industrialized areas where any discrete cleanup to levels lower than "background" onsite would soon be overcome by the influence of sediments from numerous offsite upstream sources of these same contaminants.

Lagoon Area

- In evaluating the alternatives for action in the lagoon area against the NCP's "balancing criteria," the State should explain the value of the proposed excavation, making clear its relationship to flood storage capacity and stream bank maintenance.
- The Board believes that there may be alternate (lower cost) approaches to constructing the proposed "Corrective Action Management Unit" in the lagoon area. For example, adequate dewatering and stabilization of the sludge may be achieved by surcharging the area to achieve load-bearing capacity, while adequate cap performance may be achieved using the surcharge soils and the proposed impermeable material. The Board recommends that the State evaluate the feasibility of this or similar approaches.

Main Plant and Slag Processing Areas

- Based on the Board's understanding that direct contact soil exposures present the only threats in the main plant and slag areas, the State should consider soil covers designed to prevent such exposures rather than the proposed impermeable caps designed to mitigate infiltration.

The NRRB appreciates the Region's efforts to work closely with the State and community to identify the current proposed remedy. The Board members also express their appreciation to the State of Indiana for their participation in the review process. We encourage Region 5 management and staff to work with their Regional NRRB representative and

the Region 5/7 Accelerated Response Center at Headquarters to discuss appropriate follow-up actions.

Please do not hesitate to give me a call if you have any questions at 703-603-8815.

cc: S. Luftig
T. Fields
B. Breen
E. Cotsworth
P. Nadeau



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Findings on the Fernald
Environmental Management Project Site - OU3

FROM: Bruce Means, Chairman
National Remedy Review Board

TO: William E. Muno, Director
Superfund Division
EPA Region 5

DATE STAMP:
MAY 30 1996

Purpose

The purpose of this memorandum is to document the findings of the National Remedy Review Board (NRRB) on the proposed remedial action described as OU3 for the Fernald Environmental Management Project Site in Ohio.

Background

As you recall, the NRRB was established as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote both consistent and cost-effective decisions at Superfund sites. All proposed cleanup actions are to be reviewed by the Board where: (1) the estimated cost of the preferred alternative exceeds \$30 million; or (2) the preferred alternative costs over \$10 million and this cost is 50% greater than that of the least-costly, protective, ARAR-compliant alternative. In its review, the NRRB considers the nature and complexity of the site; health and environmental risks; the range of alternative actions considered to address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors or program guidances.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker prior to issuance of the proposed plan who is expected to give the Board's recommendations substantial weight. However, other important factors may influence the final Regional decision such as subsequent public comment or technical analyses of remedial options. It is important to remember that the NRRB does not change the Agency's delegation authorities or alter in any way the public's current role in site decisions. This Reform is intended to

bring to bear the program's extensive experience on decisions at a select number of high stakes sites.

NRRB Findings

The NRRB reviewed relevant site information submitted by Region 5 on OU3 for the Fernald Environmental Management Project Site and discussed related issues with Region 5 staff on March 4 and 12, 1996. A representative from the Ohio Environmental Protection Agency participated in the conference call on March 12. Based on this review and related discussion, the NRRB finds the proposed remedy to be cost-effective and consistent with other actions taken at this site. Further, the NRRB finds that the proposed remediation action fully satisfies the requirements set forth in the National Oil and Hazardous Substances Contingency Plan (NCP) and applicable program guidance. Finally, the NRRB acknowledges that potentially cost-saving refinements to the remedy may occur during the design phase as a result of already planned value engineering studies, and the potential to recycle waste materials.

The Board members would like to thank Regional staff and management for their support and participation in this review process. If you have any questions about these findings, please call me at 703-603-8815.

cc: V. Adamkus
S. Luftig
E. Laws
T. Fields
J. Woolford
J. Breen
J. Clifford
P. Nadeau



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Findings on the Fernald
Environmental Management Project Site - OU5

FROM: Bruce Means, Chairman
National Remedy Review Board

TO: William E. Muno, Director
Waste Management Division
EPA Region 5

DATE/STAMP:
MAY 30 1996

Purpose

The purpose of this memorandum is to document the findings of the National Remedy Review Board (NRRB) on the proposed remedial action for the OU5 for the Fernald Environmental Management Project Site in Ohio.

Background

As you recall, the NRRB was established as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote both consistent and cost-effective decisions at Superfund sites. All proposed cleanup actions are to be reviewed by the Board where: (1) the estimated cost of the preferred alternative exceeds \$30 million; or (2) the preferred alternative costs over \$10 million and this cost is 50% greater than that of the least-costly, protective, ARAR-compliant alternative. In its review, the NRRB considers the nature and complexity of the site; health and environmental risks; the range of alternative actions considered to address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors or program guidances.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker prior to issuance of the proposed plan who is expected to give the Board's recommendations substantial weight. However, other important factors may influence the final Regional decision such as subsequent public comment or technical analyses of remedial options. It is important to remember that the NRRB does not change the Agency's delegation authorities or alter in any way the public's current role in site decisions. This Reform is intended to

bring to bear the program's extensive experience on decisions at a select number of high stakes sites.

NRRB Findings

The NRRB reviewed relevant site information submitted on OU 5 for the Fernald Environmental Management Project Site and discussed related issues with the EPA Regional Remedial Project Manager on January 25, 1996. Based on this review and related discussion, the NRRB finds the proposed remedy to be consistent with actions taken at similar sites in other EPA Regions. Further, the NRRB finds that the proposed remedial action meets the requirements set forth in the National Oil and Hazardous Substances Contingency Plan (NCP) and applicable program guidance.

The Board members would like to thank Regional staff and management for their support and participation in this review process. If you have any questions about these findings, please call me at 703-603-8815.

cc: V. Adamkus
S. Luftig
E. Laws
T. Fields
J. Woolford
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the Joliet Superfund Site

FROM: Bruce K. Means, Chair
National Remedy Review Board

TO: William E. Muno, Director
Superfund Division
EPA Region 5

DATE STAMPED:
JAN 13 1998

Purpose

The National Remedy Review Board (NRRB) has completed its review of the proposed remedial action for the Joliet Army Ammunition Plant (JAAP) Superfund Site in Will County, Illinois. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review

As you recall, the Administrator announced the NRRB as one of the October 1995 Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost proposed response actions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative.

The NRRB review evaluates the proposed actions for consistency with the National Contingency Plan and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. The Region will then include these recommendations in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is

important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

NRRB Advisory Recommendations

The NRRB reviewed the informational package for the site and discussed related issues with EPA RPM Bob Bowden, and Larry Eastep of the Illinois Environmental Protection Agency on December 2, 1997. Based on this review and discussion, the NRRB generally supports the Army's proposed alternative and offers the following comments.

- The Board supports the Army's limited action alternative for ground water actions at the site. However, additional analysis will be necessary to evaluate the effectiveness of natural attenuation. Given this uncertainty, the Army should define in its decision document the process by which it would invoke a contingency remedy and the data needed to do so in the event one is necessary. The Board refers the Army to OSWER Directive # 9200.4-17 *Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites*, December 1, 1997, and OSWER Directive 9283.1-03 *Suggested ROD Language for Various Ground Water Remediation Options*, October 10, 1990, for more specific guidance.
- Program experience at other sites indicates that toluene tank farms are often associated with light non-aqueous phase liquid (LNAPL) ground water contamination problems. Since the JAAP has such a tank farm, the Army should ensure that their investigations have evaluated the potential for subsurface LNAPL contamination in this area. This is especially important since the Army's preferred alternative relies heavily on monitored natural attenuation to address GW contamination in this area.
- The NCP sets forth program expectations to treat principal threats wherever practicable. Another expectation is to contain low level threats, because treatment for these wastes may not be cost effective or practicable. The NCP also states that, for many sites, EPA will use a combination of treatment and containment. For this site, the information presented to the Board did not fully explain the extent to which the explosives-contaminated soils to be treated constitute principal threat wastes. The Board believes that less costly containment alternatives may be adequate for at least some of these materials, given the anticipated future land use and ground water considerations at the site. The Army should further explore these alternatives or more thoroughly explain in the decision document its rationale for choosing treatment over containment.
- The Board recognizes the difficulty in establishing ecological risk-based preliminary remediation goals (PRGs) for explosives at this site. For this reason, the Army should consider monitoring to verify that the human health PRGs used for the prairie ultimately achieve the desired ecological endpoints.
- The Army should revise the PRGs for PCBs and lead to be consistent with EPA guidance, future land use, and the ecological risk assessment for the site.
- The Army should explain its rationale for addressing subsurface soil. This explanation should consider the potential for soil contamination as a continuing source of groundwater contamination, the exposure assumptions used in establishing PRGs (for the protection of health and/or environmental effects), and the incremental costs associated with addressing subsurface soils.

- EPA risk assessment guidance states that if key toxicity data are not in EPA's Integrated Risk Information System (IRIS), Regions should consult the Health Effects Assessment Summary Tables (HEAST). If this information is not in the HEAST or the documents referenced in it, Regions should consult with EPA's Superfund Health Risk Assessment Technical Support Center in Cincinnati, OH. Since a reference dose for Tetryl (trinitro-phenylmethylnitramine) is in the HEAST and has been used by Regions and States at other sites, the Army should clarify its rationale for selecting a more conservative Tetryl reference dose for use at JAAP.
- The Board is concerned that exposure assumptions used in the Army's maintenance worker exposure scenario to calculate the PRGs for the manufacturing and load-assemble-package areas may be too conservative, given the expected future land use (Midewin National Tallgrass Prairie).
- CERCLA may not require the removal of sulphur-contaminated soil as a hazardous substance in Soil Remediation Unit (SRU) 7, although the Board supports the Army's plans to do so. The Army should clarify in its decision document their rationale for the planned soil removal.

The NRRB appreciates the Region's efforts to work closely with the Army, State, and community to identify the current proposed remedy. The Board members also express their appreciation to the Region and the State of Illinois for their participation in the review process. We encourage Region 5 management and staff to work with their Regional NRRB representative and the Region 5/7 Accelerated Response Center at Headquarters to discuss any appropriate follow-up actions.

Please do not hesitate to give me a call if you have any questions at 703-603-8815.

cc: S. Luftig
T. Fields
B. Breen
E. Cotsworth
J. Woolford
C. Hooks
OERR Regional Center Directors



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the Lenz Oil Superfund Site

FROM: Bruce K. Means, Chair
National Remedy Review Board

TO: William E. Muno, Director
Superfund Division
EPA Region 5

DATE STAMPED:
JAN 13 1998

Purpose

The National Remedy Review Board (NRRB) has completed its review of the proposed remedial action for the Lenz Oil Site in Lemont, Illinois. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review

As you recall, the Administrator announced the NRRB as one of the October 1995 Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost (and thus potentially controversial) proposed response actions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative.

The NRRB review evaluates the proposed actions for consistency with the National Contingency Plan and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. The Region will then include these recommendations in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of

remedial options, may influence the final Regional decision. It is important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

NRRB Advisory Recommendations

The NRRB reviewed the informational package for the site and discussed related issues with EPA's Bill Bolen and Mary Tierney, and Larry Eastep of the Illinois Environmental Protection Agency on December 2-3, 1997. Based on this review and discussion, the NRRB supports the Region's preference for alternative 9(a), which includes alternative 10 as a contingency. The Board offers the following comments.

- The Region should state in its decision document the criteria it will use to determine whether to invoke the contingent remedy (alternative 10).
- The Region's preferred alternative relies substantially on excavation and treatment that may trigger costly RCRA Subtitle C and/or State waste disposal requirements. The Board strongly supports the evaluation during remedial design of the capability of vacuum enhanced recovery (or other equivalent technologies) for managing adequately the light non-aqueous phase liquid (LNAPL). These technologies may have the potential to achieve cleanup objectives while avoiding the disposal and management costs associated with the proposed excavation and treatment alternative.
- The information presented to the Board did not sufficiently define the physical properties (i.e. thickness of the LNAPL and smear layers) governing the interaction between the LNAPL layer/smear layer and the dissolved phase in groundwater. In order to better evaluate during the remedial design the relative performance of the competing alternatives, the Region should refine its characterization of such physical properties.
- The Board questions whether Alternative 2 (which is the least expensive alternative that complies with applicable or relevant and appropriate requirements (ARARs)), can be completed in ten years. For this reason, the Board encourages the Region to consider the effects that a longer remediation time frame would have on the Alternative 2 cost estimate.
- The Region should consider quick response actions to protect the nearby underground pipeline from migrating LNAPL. Doing so should prevent the pipeline from becoming a preferential pathway for LNAPL migration to surface water and reduce cleanup complexity should the LNAPL move into the pipeline corridor.

The NRRB appreciates the Region's efforts to work closely with the State and community to identify the current proposed remedy. The Board members also express their appreciation to the Region and the State of Illinois for their participation in the review process. We encourage Region 5 management and staff to work with their Regional NRRB representative and the Region 5/7 Accelerated Response Center at Headquarters to discuss any appropriate follow-up actions.

Please do not hesitate to give me a call if you have any questions at 703-603-8815.

cc: S. Luftig
T. Fields
B. Breen
J. Woolford
C. Hooks
E. Cotsworth

OERR Center Directors



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
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RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the New Brighton Superfund Site

FROM: Bruce K. Means, Chair
National Remedy Review Board

TO: William E. Muno, Director
Waste Management Division
EPA Region 5

DATE STAMPED:
OCT 16 1996

Purpose

The National Remedy Review Board (NRRB) has completed its review of the proposed remedial action for the New Brighton Superfund site in Arden Hills, Minnesota. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review

As you recall, the Administrator announced the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost (and thus potentially controversial) proposed response actions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative. The NRRB review evaluates the proposed actions for consistency with the National Contingency Plan and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. The Region will then include these recommendations in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is

important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

NRRB Advisory Recommendations

The NRRB reviewed the site package for the New Brighton site and discussed related issues with the State of Minnesota Project Manager Dagmar Romano and EPA Remedial Project Manager Tom Barounis on August 15th, 1996. Based on this review and discussion, the NRRB makes the following recommendations:

- The NRRB finds that the basis for the preferred soil remediation goals are unclear. The Board believes that some of these goals are low (e.g., dioxin/furans, arsenic), particularly given the proposed industrial exposure scenario. Further, the Army should consider using one or more of the recently developed adult lead exposure models (e.g., the "Bowers model" currently under consideration by the Superfund Lead Technical Review Workgroup) to assist in evaluating baseline risk, and to help establish a site-specific lead cleanup level. Although not yet adopted in formal Agency policy, use of such a model can help fine-tune, or provide additional scientific and technical support for the Region's proposed soil lead cleanup level. The discussion of cleanup goals should clearly identify which contaminants are determining the scope and cost of excavation. The goals should also take into account reasonably anticipated future land use (see the last discussion point below).
- The NRRB supports the excavation and offsite disposal of the small volumes of contaminated soil that the Army has proposed. The NRRB recommends that the Army evaluate the cost effectiveness of onsite vs. offsite stabilization (if needed) of excavated soils. The NRRB also supports the expanded use of soil vapor extraction to address the contaminated subsurface soils. However, the Army should consider further characterization of the soils beneath buildings in areas I and K to determine the practicability and benefits of active remediation vs. the present containment approach.
- The NRRB could not ascertain whether the Army's objective for groundwater is to contain (or attenuate) contamination, or to restore the groundwater. If restoration is a final groundwater treatment objective, the Army should evaluate more aggressive treatment options. Until the practicability of restoration is determined, the NRRB recommends that the deep ground water portion of this remedy be considered an interim response.
- If the Army's groundwater remediation strategy includes the use of a technical impracticability waiver, adequate data should be gathered to determine the practicability of restoration. For example, if a technical impracticability waiver is to be based on the presence of DNAPLs, the Army should further evaluate the extent of this problem. The NRRB also notes that, given the extent of groundwater contamination and the several municipalities and jurisdictions affected, successful institutional controls are particularly important to ensure protectiveness of the groundwater response strategy.
- EPA's May 25, 1995, Directive on Land Use in the CERCLA Remedy Selection Process (OSWER Directive No. 9355.7-04) states that appropriate discussions with the public should be conducted as early as possible in the scoping phase of the Remedial Investigation/Feasibility Study. From the materials available to the NRRB, it does not appear that the Army sought community input in determining the proposed reasonably anticipated future land use (industrial). Further, it is not clear how the Re-use Committee

and Re-use Plan developed for the site affected the Army's proposed land use determination.

The NRRB appreciates the Region's efforts to work closely with Army, the State, and the community to identify the current proposed remedy. The Board members also express their appreciation to both the Region and the State of Minnesota for their participation in the review process. We encourage Region 5 management and staff to work with their Regional NRRB representative and the Region 5/7 Accelerated Response Center at Headquarters to discuss appropriate follow-up actions.

Please do not hesitate to give me a call if you have any questions at 703-603-8815.

cc: V. Adamkus
S. Luftig
E. Laws
T. Fields
P. Nadeau
J. Woolford



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the Tar Creek Superfund Site

FROM: Bruce K. Means, Chair
National Remedy Review Board

TO: Myron O. Knudson, Director
Superfund Division
EPA Region 6

DATE STAMPED:
MARCH 4 1997

Purpose

The National Remedy Review Board (NRRB) has completed its review of the proposed remedial action for the Tar Creek Superfund site in Ottawa County, Oklahoma. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review

As you recall, the Administrator announced the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost (and thus potentially controversial) proposed response actions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative. The NRRB review evaluates the proposed actions for consistency with the National Contingency Plan and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. The Region will then include these recommendations in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

NRRB Advisory Recommendations

The NRRB reviewed the package for the residential properties operable unit at the Tar Creek site and discussed related issues with - EPA Remedial Project Manager Noel Bennett and Toxicologist Ghassan Khoury; Oklahoma Department of Environmental Quality representatives Monty Elder and Kelly Dixon; InterTribal Environmental Council representative Kent Curtis; and Quapaw Tribe representative John Gault on January 28, 1997. Based on this review and discussion, the NRRB generally supports the Region's preferred alternative. In addition, the Board makes the following comments and recommendations for the Region's consideration.

- Given the widespread distribution of chat mining wastes throughout the community and the resulting potential for multiple pathway exposures, the Board recommends that the Region clarify the relationship of this action to future actions the Region may take to address remaining contamination at the site (e.g., chat piles, tailings ponds, undeveloped land, industrial properties, etc.).
- In view of this contamination and uncertainties in implementing the remedy (e.g., the ability to secure access to all contaminated residential properties), community protective measures are likely to play an important supplemental role at this site in protecting human health. The Region should therefore include in the preferred alternative (Alternative 2 in the proposed plan) the provisions for counseling and public education (e.g., emphasizing proper personal hygiene and the importance of removing indoor dust).
- The Region should make it clear to residents that there may be a residual indoor dust threat following soil excavation, that normal household cleaning will reduce the contamination to a protective level, and that the Region will loan HEPA vacuums to residents to expedite this process, if this service is not provided by others.
- The Region should encourage the Bureau of Indian Affairs and the State to address potential recontamination sources (e.g., to control redistribution of chat around residences, potential deterioration of exterior lead-based paint, etc.).
- Given the preliminary results of a recent blood lead study that indicate a significant portion of the children in the Tar Creek area already experience elevated blood lead levels, the Board encourages continued blood lead monitoring of children through the State and local health agencies. Such monitoring would help local public health officials track the overall success of multi jurisdictional efforts to reduce childhood lead exposures in Tar Creek.

The NRRB appreciates the Region's efforts to work closely with the State, Indian Tribes, and the community to identify the current proposed remedy. The Board members also express their appreciation to the Region, the State of Oklahoma, the InterTribal Environmental Council, and the Quapaw Tribe for their participation in the review process. We encourage Region 6 management and staff to work with their Regional NRRB representative and the Region 2/6 Accelerated Response Center at Headquarters to discuss appropriate follow-up actions.

Please do not hesitate to give me a call if you have any questions at 703-603-8815.

cc: J. Saginaw
S. Luftig
E. Laws
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the
Tex Tin Site

FROM: Bruce K. Means, Chair
National Remedy Review Board

TO: Myron O. Knudson, Director
Superfund Division
EPA Region 6

DATE STAMPED:
AUGUST 15 1997

Purpose

The National Remedy Review Board (NRRB) has completed its review of the proposed remedial action for the Tex Tin site located in Texas City, Texas. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review

As you recall, the Administrator announced the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost (and thus potentially controversial) proposed response actions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative. The NRRB review evaluates the proposed actions for consistency with the National Contingency Plan and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. The Region will then include these recommendations in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is

important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

NRRB Advisory Recommendations

The NRRB reviewed the package for the Tex Tin site and discussed related issues with EPA Remedial Project Manager Carlos Sanchez, geologist Joe Kordzi, and Texas Natural Resource Conservation Commission (TNRCC) representative Nancy Overesch on July 30, 1997. Based on this review and discussion, the NRRB makes the following comments and recommendations.

- Based on the information provided, the groundwater at the site appears to be a potential drinking water source under EPA guidelines. However, the proposed groundwater remedy (monitoring) appears to be inconsistent with the Agency's groundwater protection strategy and the NCP's expectation that groundwater be restored for beneficial use (NCP Preamble, Vol.55, No.46, March 8, 1990; 40 CFR Part 300, p.8733). The NRRB recommends that the Region address the Agency strategy and NCP expectation in its proposed alternatives. In addition, soil cleanup goals should address any potential threat to groundwater from the leaching of soil contaminants.
- The Region should clarify the rationale for the proposed remediation goals at the site and how they were determined in the context of the NCP's "point of departure" provisions (NCP Section 300.430(e)(9)).
- The proposed plan indicates that inorganic contaminants pose a potential ecological threat to receptors at the Tex Tin site. The Region should clarify how this threat is addressed by the proposed response action alternatives and their associated remediation goals.
- The information provided does not fully explain how the Region plans to deal with naturally occurring radioactive materials (NORM slag) in surface soils and low level radioactive waste buried on site. The Region should clearly explain, both from a risk assessment and waste management perspective, how radiological threats are addressed at this site.
- The Region should reconcile the State of Texas regulations for disposal of NORM materials with the preferred alternatives involving onsite disposal.
- The proposed action relies directly on the Toxicity Characteristic Leaching Procedure (TCLP) to identify soils and sediments to be treated as "principal threats." The TCLP is a test for determining whether a waste is a "characteristic" hazardous waste under RCRA. It often does not reliably predict the potential mobility of soil contaminants under the variety of conditions found at Superfund sites. In particular, given the site contaminants at Tex Tin, the Region's use of TCLP to determine principal threats may result in an excessive amount of material being treated. The Region should develop a site-specific rationale for identifying principal threat wastes at Tex Tin in the context of the NCP (40 CFR Section 300.430(a)(1)(iii)) and related guidance (e.g., A Guide to Principal Threat and Low Level Threat Wastes, Superfund Publication: 9380.3-06FS).
- Before issuing the proposed plan, the Region should reach agreement with TNRCC regarding the appropriate classification and use of the on-site injection well.

- If the underground-injection based alternative is proposed, the Region should better justify its cost effectiveness, because the costs of this proposal are greater than similarly protective alternatives.
- The Region should clarify the rationale for proposing alternative "BLD 3" (decontamination and demolition of the buildings) over alternative "BLD2" (building decontamination), to justify the incremental cost of approximately \$7.0 million.

The NRRB appreciates the Region's efforts to work closely with the State to develop the current proposed remedy. The Board members also express their appreciation to the Region and the State of Texas for their participation in the review process. We encourage Region 6 management and staff to work with their Regional NRRB representative and the Region 2/6 Accelerated Response Center at Headquarters to discuss appropriate follow-up actions.

Please do not hesitate to give me a call if you have any questions at 703-603-8815.

cc: S. Luftig
T. Fields
E. Shaw
B. Breen
J. Woolford
E. Cotsworth



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on Operable
Unit 2 of the Former Nebraska Ordnance Plant Site

FROM: Bruce K. Means, Chair
National Remedy Review Board

TO: Michael J. Sanderson, Director
Superfund Division
EPA Region 7

DATE STAMPED:
AUGUST 15 1997

Purpose

The National Remedy Review Board (NRRB) has completed its review of the selected remedial action at Operable Unit 2 for the former Nebraska Ordnance Plant site in Mead, Nebraska. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review

As you recall, the Administrator announced the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost (and thus potentially controversial) proposed response actions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative. The NRRB review evaluates the proposed actions for consistency with the National Contingency Plan and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. The Region will then include these recommendations in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is

important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

NRRB Advisory Recommendations

The NRRB reviewed the site package for the Nebraska Ordnance Superfund site and discussed related issues with EPA Remedial Project Manager Craig Bernstein and State of Nebraska Remedial Project Manager Troy Bredenkamp on July 29, 1997. Based on this review and discussion, the NRRB supports the Region's selected remedial action for this operable unit.

The NRRB appreciates the Region's efforts to work closely with the State and community to identify the selected remedy at this site. The Board members also express their appreciation to both the Region and the State of Nebraska for their participation in the review process.

Please do not hesitate to give me a call if you have any questions at 703-603-8815.

cc: S. Luftig
T. Fields
B. Breen
E. Cotsworth
J. Woolford
P. Nadeau



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND
EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the
Anaconda Smelter Superfund Site

FROM: Bruce K. Means, Chair
National Remedy Review Board

TO: John Wardell, Director
Montana Operations Office, EPA Region 8

Max Dodson, Assistant Regional Administrator, Office of
Ecosystems Protection and Remediation, EPA Region 8

DATE STAMPED:
JUNE 24 1997

Purpose

The National Remedy Review Board (NRRB) has completed its review of the proposed remedial action for the Anaconda Smelter Superfund site in Southwestern Montana. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review

As you recall, the Administrator announced the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost (and thus potentially controversial) proposed response actions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative. The NRRB review evaluates the proposed actions for consistency with the National Contingency Plan and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. The Region will then include these recommendations in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is

important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

NRRB Advisory Recommendations

The NRRB reviewed the site package for the Anaconda Smelter Superfund site and discussed related issues with EPA Remedial Project Managers Julie DalSoglio and Charlie Coleman, EPA Superfund Branch Chief Bob Fox, EPA Montana Office Director John Wardell, and State of Montana representatives Vic Andersen and Mary Capdeville on March 19, 1997. The NRRB continued its discussion with Julie DalSoglio, Charlie Coleman, and EPA toxicologist Dale Hoff on April 24, 1997. Based on this review and discussion, the NRRB generally supports the Region's preferred alternative. The Board also makes the following recommendations:

- The Board understands that the Proposed Plan would call for extensive engineering controls should groundwater quality standards be exceeded at either point of compliance for the Opportunity or Anaconda Ponds. The Board recommends that the Region conduct additional analysis of groundwater remedial alternatives when monitoring indicates contamination has migrated beyond either of these points of compliance.
- Given the large area proposed for remediation and the likelihood that site land uses will continue to be mixed, the Region should tailor remediation driven by ecological endpoints to those areas where the results are reasonably expected to be sustained. The Board recommends that the Region work closely with the state, local community, the PRPs, and other federal agencies in making this determination.
- During remedial design it may be possible to take advantage of existing soil or hydrogeologic characteristics to refine and focus the extent or intensity of remediation work and still achieve the desired remediation endpoints in a reasonable timeframe. The Region should continue to examine key areas in more detail to refine the number of acres needing the various levels of remediation to optimize the cost-effectiveness of the revegetation.

The NRRB appreciates the Region's efforts to work closely with the State and community to identify the current proposed remedy. The Board members also express their appreciation to both the Region and the State of Montana for their participation in the review process. In particular the Board wishes to thank Julie DalSoglio for her thorough and effective presentation. The NRRB encourages Region 8 management and staff to work with their Regional NRRB representative and the Region 3/8 Accelerated Response Center at Headquarters to discuss appropriate follow-up actions.

Please do not hesitate to give me a call if you have any questions at 703-603-8815.

cc: T. Fields
S. Luftig
B. Breen
E. Cotsworth
T. Sheckells



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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MEMORANDUM

SUBJECT: National Remedy Review Board Findings on the
Petrochem/Ekotek Superfund Site - OU5

FROM: Bruce Means, Chairman
National Remedy Review Board

TO: Max Dodson, Assistant Regional Administrator
Office of Ecosystems Protection and Remediation
EPA Region 8

DATE STAMP:
MAY 30 1996

Purpose

The purpose of this memorandum is to document the findings of the National Remedy Review Board (NRRB) on the proposed remedial action for the Petrochem/Ekotek Superfund Site in Utah.

Background

As you recall, the NRRB was established as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote both consistent and cost-effective decisions at Superfund sites. All proposed cleanup actions are to be reviewed by the Board where: (1) the estimated cost of the preferred alternative exceeds \$30 million; or (2) the preferred alternative costs over \$10 million and this cost is 50% greater than that of the least-costly, protective, ARAR-compliant alternative. In its review, the NRRB considers the nature and complexity of the site; health and environmental risks; the range of alternative actions considered to address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors or program guidances.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker prior to issuance of the proposed plan who is expected to give the Board's recommendations substantial weight. However, other important factors may influence the final Regional decision such as subsequent public comment or technical analyses of remedial options. It is important to remember that the NRRB does not change the Agency's delegation authorities or alter in any way the public's current role in site decisions. This Reform is intended to bring to bear the program's extensive experience on decisions at a select number of high stakes sites.

NRRB Findings

The NRRB reviewed the proposed plan for the Petrochem/Ekotek site along with other relevant site information and discussed related issues with the EPA Regional Project Manager and State of Utah participants (J.D. Keetly, Project Manager, and Brad T. Johnson, CERCLA Branch Manager) on January 31, 1996. Based on this review and discussion, the members of the NRRB make the following observations:

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) sets forth program expectations for the Agency in developing appropriate remedial alternatives. One such expectation is to treat principal threats, wherever practicable. Another expectation is to contain low level threats, because treatment for these wastes is likely not to be cost effective or practicable. For many sites, the NCP further states that EPA expects to use a combination of treatment and containment. While no exact definition of principal threat and low-level threat has been provided, EPA has issued "A Guide to Principal Threat and Low Level Threat Wastes," which indicates that low level threats would include "low toxicity source material...soil concentrations not greatly above reference dose levels or that present an excess cancer risk near the acceptable risk range."

- Based on these NCP expectations and previous program experience, the NRRB fully supports the proposed remedial approach for addressing light non-aqueous phase liquids (LNAPLs), soil hot spots, and contaminated debris which constitute the principle threats at the Petrochem site. The NRRB also fully supports the proposed approach for addressing contaminated groundwater.
- However, based on the analysis of available information and related discussions, as well as other NCP expectations and Superfund program experience, the NRRB recommends the following:
 - The Region should reconsider the action proposed to address the low level contaminated soils at this site (i.e., thermal desorption). The Board believes that other approaches to remediating the threat of low level soil contamination, which could still fully satisfy the NCP, are available at significantly lower cost.--The Region should continue to work closely with the State, community and other stakeholders to consider approaches taken at similar sites in other Regions, where low level soil contamination has been addressed through offsite disposal at a Subtitle D facility, use of various cover materials, containment and/or land use controls or deed restrictions. These alternative approaches for addressing Superfund low level threats are fully protective of human health and the environment and allow for a wide range of recreational, commercial, or other beneficial uses.
 - Notwithstanding the above comments, the NRRB also acknowledges that, overall, the proposed approach is not inconsistent with the NCP remedy selection criteria. The Board further recognizes that the Region must take into account the opinions of the community and the State in making remedy selection decisions. Based on the information presented to the Board, it appears that in this case these two modifying criteria are the main drivers for the preference of a more costly remedy.

The NRRB appreciates the extensive Regional efforts already made in working closely with the State, community, and responsible parties to identify the currently proposed remedy. However, the NRRB believes that the Region may benefit from considering other less costly alternatives

that address only the principal threats through treatment while yielding fully beneficial property use with minimum restrictions.

The Board members especially want to thank the Region and the State of Utah for their participation in the review process. We encourage Region 8 management and staff to work with the Regional NRRB representative and the OERR Region 3/8 Service Center at Headquarters to discuss appropriate followup actions. If you have any questions, please do not hesitate to call me at 703-603-8815.

cc: S.Luftig
E. Laws
T. Fields
J. Clifford
J. McGraw, Acting Regional Administrator
T. Sheckells, Region 3/8 Accelerated Response Center



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WASHINGTON, D.C. 20460

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MEMORANDUM

SUBJECT: National Remedy Review Board Findings on the Operating Industries, Inc.

FROM: Bruce Means, Chairman
National Remedy Review Board

TO: Keith Takata, Director
Superfund Division
EPA Region 9

DATE STAMP:
MAY 30 1996

Purpose

The purpose of this memorandum is to document the findings of the National Remedy Review Board (NRRB) on the proposed final site-wide remedial action at the Operating Industries, Inc. site in California.

Background

As you recall, the NRRB was established as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote both consistent and cost-effective decisions at Superfund sites. All proposed cleanup actions are to be reviewed by the Board where: (1) the estimated cost of the preferred alternative exceeds \$30 million; or (2) the preferred alternative costs over \$10 million and this cost is 50% greater than that of the least-costly, protective, ARAR-compliant alternative. In its review, the NRRB considers the nature and complexity of the site; health and environmental risks; the range of alternative actions considered to address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors or program guidances.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker prior to issuance of the proposed plan who is expected to give the Board's recommendations substantial weight. However, other important factors may influence the final Regional decision such as subsequent public comment or technical analyses of remedial options. It is important to remember that the NRRB does not change the Agency's delegation authorities or alter in any way the public's current role in site decisions. This Reform is intended to bring to bear the program's extensive experience on decisions at a select number of high stakes sites.

NRRB Findings

The NRRB reviewed relevant site information submitted on this site and discussed related issues with both the EPA Regional and State Remedial Project Managers on January 31, 1996. Based on this review and related discussions, the NRRB finds the proposed site-wide remedy to be consistent with actions at similar sites in other EPA Regions. Further, the NRRB finds that the proposed remediation action meets requirements set forth in the National Oil and Hazardous Substances Contingency Plan (NCP) and applicable program guidance.

The Board members would like to thank Regional staff and management for their support and participation in this review process. If you have any questions about these findings, please call me at 703-603-8815.

cc: S.Luftig
E. Laws
T. Fields
J. Clifford
F. Marcus
M. Newton



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the San Gabriel Valley Superfund Site, Puente Valley Operable Unit

FROM: Bruce K. Means, Chair
National Remedy Review Board

TO: Keith Takata, Director
Superfund Division
EPA Region 9

DATE STAMPED:
DEC 18 1997

Purpose

The National Remedy Review Board (NRRB) has completed its review of the proposed remedial action for the San Gabriel Valley, California, Superfund site, Puente Valley Operable Unit. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review

As you recall, the Administrator announced the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost proposed response actions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative.

The NRRB review evaluates the proposed actions for consistency with the National Contingency Plan and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. The Region will then include these recommendations in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is

important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

NRRB Advisory Recommendations

The NRRB reviewed the informational package for the site and discussed related issues with EPA's Eugenia Chow and Elizabeth Adams, and John Bishop from the Los Angeles Regional Water Quality Control Board (RWQCB). Based on this review and discussion, the NRRB supports the Region's preferred alternative (Alternative 3) and offers the following recommendations.

- The Board strongly supports efforts to obtain a waiver from state discharge requirements to treat for total dissolved solids and/or nitrates. Less costly alternatives for managing discharge water should be pursued if a waiver is not granted.
- In addition to the implementation of Alternative 3, continued aggressive action to require PRPs to address facility-specific contamination sources in the Puente Valley area should be pursued. Such action is important to minimize continued aquifer degradation and reduce the potential for future groundwater remediation efforts.
- The Remedial Design should include an evaluation of whether in-situ technologies (e.g., NoVOCs, Unterdruck-Verdampfer-Brunnen technology) can help reduce the amount of water that needs to be extracted while achieving Alternative 3's containment objectives.
- In order to augment Alternative 3, in-situ bioremediation should be evaluated to determine if it can reduce hot spot contaminant mass in the shallow and intermediate regional ground water plumes.

The NRRB appreciates the Region's efforts to work closely with the State and community to identify the current proposed remedy. The Board members also express their appreciation to both the Region and the State of California for their participation in the review process. We encourage Region 9 management and staff to work with their Regional NRRB representative and the Region 1/9 Accelerated Response Center at Headquarters to discuss appropriate follow-up actions.

Please do not hesitate to give me a call if you have any questions at 703-603-8815.

cc: S. Luftig
T. Fields
B. Breen
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M. Newton



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations on the Shipyard Sediments Superfund Site

FROM: Bruce K. Means, Chair
National Remedy Review Board

TO: Randy Smith, Director
Environmental Cleanup Office (ECL-113)
EPA Region 10

DATE STAMPED:
SEP 12 1996

Purpose

The National Remedy Review Board (NRRB) has completed its review of the proposed remedial action for the Shipyard Sediments Operable Unit of the Harbor Island Superfund site in Seattle, Washington. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review

As you recall, the Administrator announced the NRRB as one of the October 1995, Superfund Administrative Reforms to help control remedy costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost (and thus potentially controversial) proposed response actions. The Board will review all proposed cleanup actions where: (1) the estimated cost of the preferred alternative exceeds \$30 million, or (2) the preferred alternative costs more than \$10 million and is 50% more expensive than the least-costly, protective, ARAR-compliant alternative. The NRRB review evaluates the proposed actions for consistency with the National Contingency Plan and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; Regional, State/tribal, and other stakeholder opinions on the proposed actions (to the extent they are known at the time of review); and any other relevant factors.

Generally, the NRRB makes "advisory recommendations" to the appropriate Regional decision maker before the Region issues the proposed plan. The Region will then include these recommendations in the Administrative Record for the site. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of remedial options, may influence the final Regional decision. It is

important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

NRRB Advisory Recommendations

The NRRB reviewed the site package for the Harbor Island, Shipyard Sediments site, as well as submissions provided on behalf of the potentially responsible parties (PRPs). The Board discussed this information with Washington State Department of Ecology sediments expert Theresa Michelsen, EPA RPM Keith Rose, and EPA Region 10 sediments expert John Malek on August 14th, 1996. Based on this review and discussion, the NRRB agrees that the ecological risks posed by the sediments at the Todd and Lockheed Martin shipyards substantiate the need for remedial action. In addition, the NRRB makes the following observations.

- The Board supports dredging as the appropriate response, given the high levels of contamination, and believes that capping alone (Alternative 2) provides less long term effectiveness than does dredging. Capping alone would also conflict with the current and future use of the Todd shipyard.
- The NRRB does not have enough information to evaluate the relative cost-effectiveness of Alternatives 3 and 4. Several variables could significantly affect the costs of these alternatives, including:
 - the lack of information about the implementability, feasibility (and cost) of under pier dredging;
 - uncertainty about the availability and location of aquatic disposal and/or upland disposal sites;
 - the uncertainty in the volumes of dredged material to be disposed.
- The Board recommends that the Region clarify how the combination of dredging and capping in Alternative 4 is intended to achieve the remedial action objectives, in order to establish the performance standards for each.

The NRRB appreciates the Region's efforts to work closely with the State, local government and community to identify the current proposed remedy. The Board members also express their appreciation to both the Region and the State of Washington for their participation in the review process. We encourage Region 10 management and staff to work with their Regional NRRB representative and the Region 4/10 Accelerated Response Center at Headquarters to discuss appropriate follow-up actions.

Please do not hesitate to give me a call if you have any questions at 703-603-8815.

cc: C. Clarke
S. Luftig
E. Laws
T. Fields
J. Cunningham
B. Breen